# Home An Argus Specialist Publication An Argus Specialist Publica

£1,000-worth of new

# MOGUL

software to be won

Software reviews for: Commodore 64, Spectrum, BBC, VIC-20, Texas, Oric, Dragon

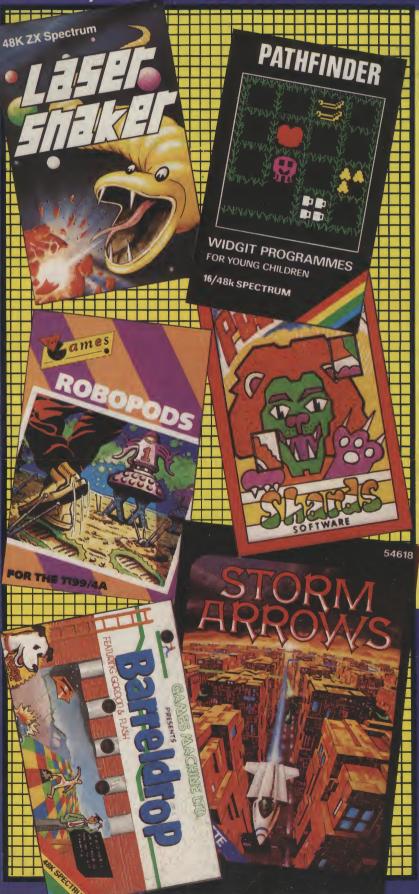
ZX Microfair: first full report

Fun Spectrum games to play

Type in our /ICpen program for great graphics

More programs to type in for: Texas, ZX81, Oric, Dragon, Atari

PLUS: news, U.S. Scene, letters, software charts



#### Bible game out for Christmas

Just in time for Christmas, a clergyman has completed a Biblical adventure set in turbulent first-century Israel.

Jericho Road was written for the Spectrum by 44-year-old Peter Goodlad, pastor of Seven Kings United Free Church, near Ilford

His Spectrum has been put to use both in church youth groups and during a Sunday service, running two of his earlier games.

One asks multiple choice questions about the parables and in the other, called The Lost Sheep, players have to round up the flock.

In Jericho Road, which costs £5.75 from Shards and runs on the 48K model, the player has to Continued on page 5

#### Decision soon on "ITV micro"

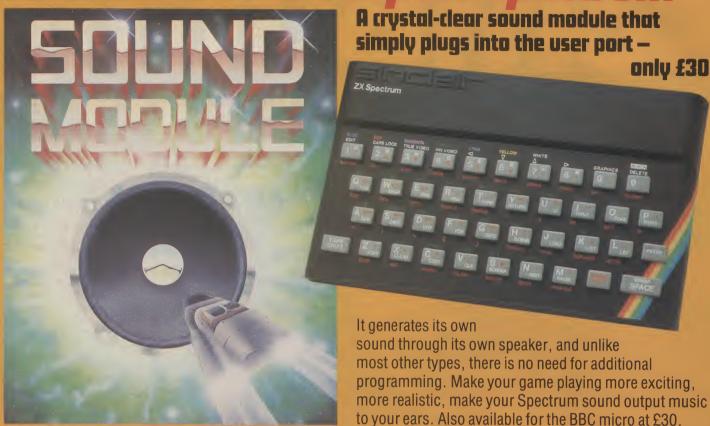
ITV companies were meeting this week to decide their future policy on computer programmes — and on proposals from some of the companies that independent ITV should produce its own rival to the BBC micro.

Reports had claimed ITV had called in micro builder Transam to produce a £400 computer with its own version of BASIC, the new Zilog Z80B processor, 64K or 256K of memory, and RS232

Continued on page 5



# A sound choice for your Spectrum—



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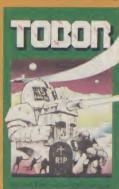
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\* 16K Spectrum – everything else 48K. All prices include p & p + VAT. UK only



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### 24 PAGES OF SPECTRUM BEST

Send 50p stamp to: Software Supermarket, 87 Howard's Lane, London SW15 6NU

Tansoft has brought out its Oricmon machine code monitor, which includes an assembler and disassembler. Other features are printer and cassette handling; trace; slow motion run; and breakpoints. The package comes with a 50-page user guide.

Tansoft, Units 1 and 2, Techno Park, Newmarket Road, Cam-

Price: £15

hridge

Melbourne House has now taken over publishing rights to Abersoft Forth. Programs in Abersoft Forth are said to run 10-15 times faster than BASIC programs, without the need to learn machine code. Price: £14.95

Melbourne House, 224 Stanley Road, Teddington, Middx. TW11 8UR

Fidelity has moved into the home computer market with a 14 inch colour monitor which it says will work with virtually any computer or games machine. It will accept a range of inputs, including RGB, RGBY or composite video, plus audio, via a 21-pin scart-type socket. It costs £200.

Fidelity, Victoria Road, London NW106ND

Taxman from Mondatta isn't a business program — it's a game where you gather as much money as possible while avoiding the taxmen's clutches. Also out from Mondatta is Supercopter, which gives you a chance to save your country from destruction. Both games are for the Commodore 64 and cost £5.65.

Mondatta, 38 Cuddington Ave, Worcester Park Surrey KT47DB

From Pan, the people who brought you the 35mm Photographer's Handbook, comes The Personal Computer Handbook. Costing £5.95 in paperback and £9.95 hardback it has chapters on the elements of a microcomputer system, how your micro works, living with computers, the electronic home, the electronic office, and computers in the future. A glossary and buyer's guide (already slightly dated) is included.

Pan Books, Cavaye Place, London SW10 9PG

# Computing WHEND

	6
Mogul Software £1,000 competition	7
Software reviews	10
Dragon 32 program	13
Software reviews	15
VIC-20 program	17
Software reviews	20
ZX8 program	23
Spectrum programs Outlaws and Apeman — two great games to try	25
Spectrum/ZX81 program3	32
Software reviews	5
Microfair report	57
Software charts	11
TI-99/4A program4	14
	_
Software reviews	19
Adventures for VIC-20, Spectrum, Texas  One Man's View	
Adventures for VIC-20, Spectrum, Texas	50
Adventures for VIC-20, Spectrum, Texas  One Man's View	3
Adventures for VIC-20, Spectrum, Texas  One Man's View  Software reviews Children's programs for BBC, Spectrum, Dragon  Oric program  5	3

#### Don't miss next week's great Christmas issue — lots of great programs to type in.

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#### **BUY THIS SPACE**

To advertise your latest products! Ring Coleen or Barry on 01-437 1002 NOW!



You'll smile too when you play the three Spectrum games in this issue



Programs for children are reviewed on page 53



Let your Dragon work out your bills in advance — just type in the listing on page 13

EARLY WARNING: We're moving. We move into our new offices on December 20. The address: No. 1 Golden Square, London W1R 3AB. Our phone number will then be: 01-437 0626.

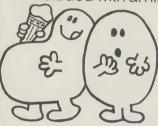
# More than fun and games!

# with the Mr. Men

by PrImer Educational Software

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by Widgit Software

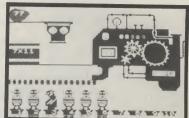
wo mind-stretching, space-age games to test mental arithmetic and nimble fingers.

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eet Caesar, a cheeky young cat on duty in a well-stocked larder. He's kept busy chasing a gang of hungry mice eating the family's food. Playing against the clock, you guide Caesar along crowded shelves to pounce on the mice.

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#### NEWS

#### Bible game

From front page

survive the rigours of Roman occupation and religious persecution in southern Israel.

He has a special mission on behalf of a persecuted minority and has a part in decoding an ancient puzzle.

Mr Goodlad said: "I'm a great believer in modern technology in the church, but it must be appropriate. The computer is a tremendous tool, but you've got to use it and not be dominated

How had his congregation reacted? He said: "I think they are a bit bemused by it, but they have been very supportive. After all, I've found another way of expanding my ministry.



The Rev Peter Goodlad believes in computers in the church

Mr Goodlad bought his Spectrum a year ago — with a lot of encouragement from his three daughters — and one of the first uses he found was for church records.

He said: "I started off thinking that was the way I was going to use it. But in order to be functional you've got to keep it up to date... and I got diverted to educational games. Maybe after Christmas I'll restore the records.'

Daughters Alison, 17, Julie, 14, and 12-year-old Sally are delighted at their father's success.

Mr Goodlad said Alison had written some small programs and gave advice on Jericho Road.

But he said of his wife Jean: "She accepts it in the house but does not want to get involved she's got enough to do.

Mr Goodlad plans to buy a full-sized printer with his royalties.

His future projects include a compendium of the best of the programs he has used in church work and further adventures based on the Bible.

He said: "There will be at least one sequel. I would love to create something out the Book of Revelations. It has some incredible imagery and dramas.

Steve Maltz, of Shards, contacted Mr Goodlad after seeing him on TV.

He said: "He's the first real churchman to take a public interest in computers. I think it's a good thing — even if you don't look at the Christian side of it.

"He's taking history and turning it into an adventure with real people.

"We are planning a few more adventures you can believe in.'

Mr Maltz said he and his wife

Monica did not belong to any denomination, but thought of themselves as religious.

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UO



Jericho Road set in turbulent times

#### **Briefly**

For working BBC micros, Alligate has brought out three utility programs: Flexibase, Alligata-calc and Scribe II. They cost £9.95 each, and disc versions are available for Flexibase (£13.95) and Scribe II (£14.95).

Alligata, 178 West Street. Sheffield S1 4ET

New software house Solway has brought out two double-game tapes for the TI-99/4A — System Trader, at £5.55, and Cruiser (£4.55). Texas withdrew from home computers just two weeks before Solway was launched too late to change course — so the firm is now thinking about writing for another computer

Solway Software, 6 Curzon Street, Maryport, Cumbria

Sunshine has brought out Graphic Art on the Commodore 64, which helps you to develop a high-res turtle graphics system. Written by Boris Allan, it costs £5.95.

Sunshine, 12-13 Little Newport Street, London WC2R 3LD

#### **ITV** micro

From front page

and Centronics interfaces.

It would also have floppy and hard disc ports, a Prestel interface, and the ability to download telesoftware.

Commenting on the reports, David Shaw, of the Independent TV Companies Association, said: "The question of the involvement of ITV as a whole in computer programmes has been looked into. The crucial factor is what the IBA would think because the IBA has to approve any action of this kind.

'The IBA has now given its response, and its reply is due to be considered when we next meet.

'Supposing the response was yes, that wouldn't be the whole story by any means. There are 15 companies in the association, and

they've all got to agree.
"Certainly five or six companies are very much looking at the concept of producing ITV computer programs, and some people within certain companies have mooted the idea of an ITV

micro. But some other companies don't think it's appropriate. After all, we do have our advertisers to consider.

"The reports about an ITV micro have jumped the gun. They've given a fair description of some of the proposals we've received, but it's all speculation at this stage.

Tom Hohenberg, of Acorn, when asked what he thought about the rumours, said: "There won't be an ITV micro. It's highly unlikely that all the ITV companies would be able to agree on a specification and marketing strategy. But I expect that individual companies will be doing their own thing, bringing out computer programmes based around existing micros — maybe including the Electron!

'It's a bit late to think about bringing out a new machine now. We've had enough production problems — we should know." He admitted, however, that "the bubble shows no sign of bursting, and sales of the BBC micro are

All Transam had to say was: "We're not allowed to say anything about it."

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"If more programs shared the quality of OMNICALC, then we might see more Spectrums in offices." Home Computing Weekly 3/5/83

"It is ideal for someone who has just found the spreadsheet concept, but it is also a very powerful tool for anyone who has used one previously."

Sinclair User June 1983

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2 original games for only £4.95

THE TRAIN GAME (any Spectrum) First there were model railways, then there were computers. Now Microsphere gives you both in one.

Featuring passenger, goods & express trains; tunnels; viaducts; points; stations; turntable bonus games; collisions; derailments; irate passengers; and everything else you expect from a major railway!

Two track layouts on each cassette. Superb value for money.

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#### Fun in a bun

Ocean Software took over a software idea from the States for its beefy new game Mr Wimpy.

According to Ocean's MD David Ward: "In the States, all consumer items from MacDonalds to Kool-Aid and Coca-Cola have been put into a computer game. The manufacturers regard it as good promotion. But it's still a new idea here."

Ocean's game includes the Wimpy logo and advertising jingle. The player has to help Mr Wimpy make hamburgers, while fending off Waldo the burger thief and kitchen rebels Oggy Egg and Syd Sos with a pepper pot. It costs £5.90 for the 48K Spectrum.

David Ward said: "At first, we though we were going to have to pay Wimpy a royalty for using the name. But when they saw the finished product, they liked it so much that they said we could use the name free, because it would be good advertising for them. And I think it will be, because the game is already selling fantastically well."

Wimpy even plans to sell the game in its hamburger shops over Christmas.

Now Ocean is following up Mr Wimpy with other games based on famous names.

It has just launched Royal

Birkdale, a golf simulation based on the well-known Southport golf course, which went down well with the club members themselves.

"They were there in their blazers with gold buttons, stabbing away at the Spectrum keyboard", David Ward recalled.

And Ocean is negotiating with two other well-known companies to launch programs along the same lines early in the new year.

Ocean, Ralli Building, Stanley Street, Manchester M3 5FD



Mr Wimpy — the hero of Ocean's new computer game

#### Briefly

House of Death, a new game for the Oric, is a follow-up from Tansoft of its Zodiac adventure. A text adventure costing £9.99, House of Death takes place in a disused film set where a werewolf, Dracula, a witch and other unpleasant characters try to stop you leaving. Defence Force is a space shoot-'em-up game at £7.95. Both games are for the 48K Oric and are from Tansoft.

Tansoft, Unit 1, Techno Park, 645 Newmarket Road, Cambridge CB5 8PB

Five new games from Abacus: Proteus, Fireflash, Munnerys Mergatroids, Galactic Warriors and Super Digger. All the games cost £5.95 each, and each include a second BASIC game on the B side. Proteus and Fireflash are also sold along with Abacus's Sentinel and Avenger in a £14.95 gift pack.

Abacus, 716 Llangyfelach Road, Trebooeth, Swansea SA5 9EL

Soft Shop is the name of yet another new chain of software shops, which will be springing up all over the Home Counties over the next few months. The first shop opened in Chalfont St Peter last November. The idea is for the shops to stock a wide range of software and accessories for different machines. Trained staff will be in attendance, and customers will be encouraged to try programs out in the shop before they buy.

Soft Shop, 10 Church Walk, Chertsey, Surrey

Smiths will soon be stocking the AMS 3 inch disk drive for the BBC micro. The drive is available in a single 100K format at £225 or a 200K format at £399, and runs off the BBC power supply.

AMS, Woodside Technology Centre, Green Lane, Appleton, Warrington, Lancs.

Dynatech has launched Home Filewriter, a do-it-yourself database program, for the Commodore 64 or Atari plus discs. You can type in the screen layout you want using ordinary English commands which the computer translates into code. The program comes with a demonstration disc, and costs £39.95.

Dynatech, Rue du Commerce, Bouet, St Peter Port, Guernsey, Channel Islands

### Your micro can put on a slide show

Here's some news about a novel and exciting program available for the VIC-20 and Commodore 64. It is called Color-Craft and can be used to allow the computer to put on a "slide show" or otherwise present variable-time screen displays of text and graphics.

Using the graphics keys, you design screen displays which are then stored. Prior to playback, you decide how long each screen will be displayed. This can create animation and/or cartoon-like effects.

The maximum number of pages available depend upon the obvious factors of screen detail and available memory. For example, a 16K VIC can store from 12 to 50 pages, each page being five characters by 10 lines, whereas a 64K 64 can store as many as 25 full screens (21 by 40). According to reports, the program is even more useful and educational than its advertisements would have you believe. This is a real treat compared to the usual situation.

It is easy enough for most children to use, and is flexible enough to allow real creativity. It is apparently well error-proofed, and supplied with very good documentation.

If you are into graphics and/or want to design your own custom screen displays without a lot of hassle this may be just the thing for you. The programs are bargain priced too. Cassette or disc versions are available. Prices: \$24.95 for VIC and 64 tape versions or \$29.95 for 64 disc. Further details are available from Sim Computer Products, P.O. Box 7, Miquon, PA 19452. (215) 825-4250.

#### $\star$ $\star$ $\star$ $\star$ =

Tandy has announced a printer for the Colour Computer. The unit is set to retail for \$99.95! It is called the TP-10, and is a thermal printer which prints a quiet 32 characters per line at 30 characters per second. Special thermal paper is of course required.

It will work with both the MC-10 Micro Colour Computer as well as the regular Colour Computer. Rolls of thermal paper, four and one half inches wide, are also available from Tandy and will cost about \$3.95 for a package of two rolls. The printer is capable of printing out 95 standard ASCII characters as well as 16 blockgraphics characters. See your local dealer for more details. Sounds like a reasonable value.

#### \* \* \* \*=

This item is included more for its humor value than anything else. Several years ago a rush of articles appeared in all the electronics technical magazines which all said about the same thing.

They were devoted to instructing the clever DIY person as to how to wire their regular television set so that their computer could send it direct video.

The result of the modification was the installation of jack on the outside of the set coupled directly to the video amplifier.

This made superfluous the use of a modulator and did much to improve the quality of the computer display. Most of these articles appeared long before the advent of the low cost VDU.

Well, now a firm in San Jose has started to market a little device which they call a tuner adapter. It connects to any monochrome or color computer monitor and, guess what? turns it into a television set!

One of the selling points the firm uses is that for about one third the cost of a color set, buyers can have a spare television.

What is really amusing is that monitors themselves cost so much more than televisions and have so much less circuitry inside.

So now computer users can pay at least one third more for a monitor than a comparably sized television and then pay an addition third to turn their monitor back into a television.

This all makes perfectly good sense if you live out here where

Out of room once again. See you next week.

Bud Izen Fairfield, California

#### COMPETITION

# Free: £1,000 worth of new

### software must be won

JUST find the words and a share of £1,000-worth of software could be yours.

We have got together with Mogul, the new force in computer software,

for this week's competition.

The 46 winners will receive a prize package of tapes worth about £22 for three of the most popular computers — the Spectrum, VIC-20 and Commodore 64.

Mogul Software, a division of video company Mogul Communications, made its debut in November with both U.S. best sellers and a range produced in Britain.

#### How to enter

The word square below contains the names of a number of Mogul soft-ware titles. They are horizontal, vertical and diagonal.

All you have to do is mark them clearly in ballpoint pen, including your computer — so we know which prizes to send — and the number of titles you found.

All the titles in the square, plus

Earthquake

Pyramid

Pollywog

Crash Annihilator

several more, are in this list: Tiny Compiler Metamorphosis Kongo Kong

Zens Creator's Revenge Super Trek The Great

Adventure Pack Potty Planter

3AB.

Las Vegas Lady Maths Tutor
When you have completed the word square and the coupon, cut around the broken lines and enclose the attached two in an envelope addressed to Mogul Software Competition, Home Computing Weekly, No. 1 Golden Square, London W1R

This is our new address from close of business on December 19.

Important: you must also write on the back of the envelope the number of software titles you found. Any without this will be discarded.

Entries close at first post on

Friday December 30.

You may enter as many times as you wish, provided each is on the official word square and coupon, not copies, and in a separate envelope.

The winners will be the first 46 correct entries opened, regardless which of the three computers have been marked on the coupons.

The solution and the names of the winners will appear on the news pages of Home Computing Weekly and the prizes will arrive from Mogul within 28 days of that issue.

Are you good with words? See how many Mogul titles you can find in our word square and you could be among our 46 winners of great new software



#### The rules

The first 46 correct entries drawn will win the prizes. Coupons which are not fully completed and envelopes without the number of differences found on the back will not be considered.

Entries close at first post on Friday, December 30, 1983.

Entries will not be accepted from employees of Argus Specialist Publications, Mogul and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.

The winners' names and the solution will appear in Home Computing Weekly. The editor's decision is final and no correspondence will be entered into



#### Mogul Software Competition

**Entry Coupon** 

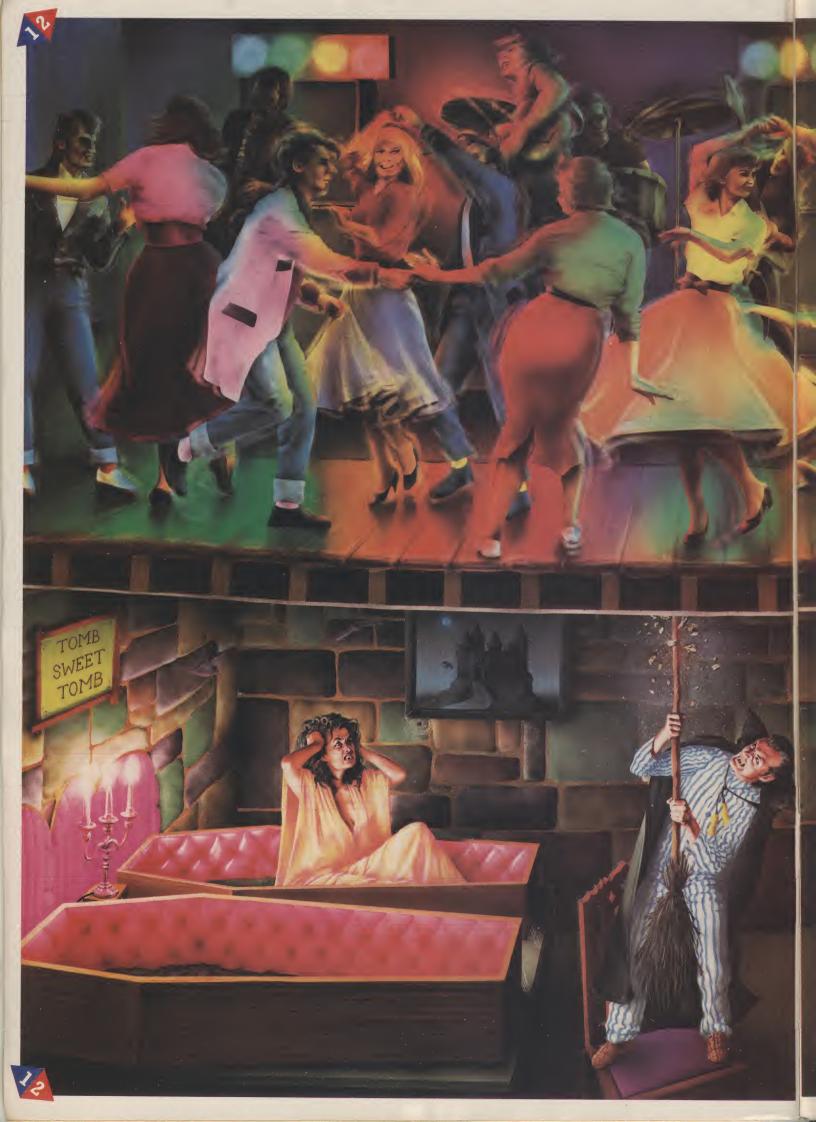
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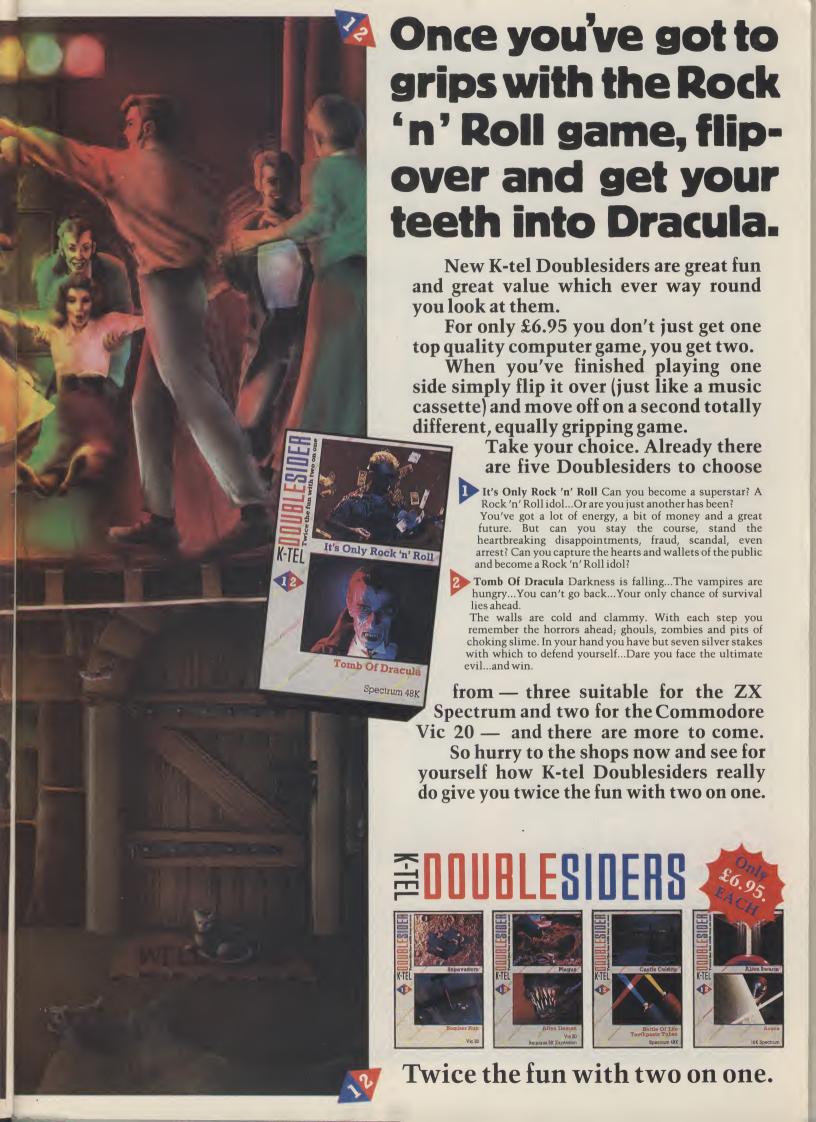
Post code\_

Number of differences found

Please complete carefully and post to Mogul Software Competition, No. 1 Golden Square, London W1R 3AB. Closing date: First post Friday December 30, 1983

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#### **SOFTWARE REVIEWS**

#### Shark Attack Spectrum

Romik, 272 Argyll Avenue, Slough, Berks

Just when you thought it was safe to go in the sea again, Romik introduces Shark Attack.

You must surround sharks with a continuous net, to prevent them eating you, or the octopuses. If a shark eats an octopus, it can eat the net and this creates a bit of bother.

Three skill levels are provided, and the cassette mentions that the game works with Kempston or Sinclair joysticks. Sinclair joysticks? Does Romik know something we don't know?

When the sharks finally finish you off, you are asked to enter your initials for the Hall of Fame; however, to do so, you are asked

to use the fire button. What fire button? Until this stage there is no mention of a fire button.

Is this a casualty of the Christmas rush, where subroutines are lifted wholesale from previous efforts and simply tacked on? Pretty poor and unprofessional if you ask me!

Despite the underwater setting, this game is too derivative to excite even the most unjaded of

Try throwing yourself on the sharks for a change, the graphics and sound effects for a 'kill' are M.B. quite good!

instructions	40%
playability	70%
graphics	70%
value for money	70%



#### Hop It! TI-99/4A (Extended **BASIC) £6.95**

Lantern Software, 4 Haffenden Road, Tenterden TN30 6QD

Yet another game of Frogger, and

by far the poorest that I have seen. the more so since the use of Extended BASIC and sprites confers the potential for an excellent imitation.

What lets this program down very heavily is the appalling keyboard response, giving delays of up to a second.

The worst is when attempting to cross from a log to a turtle. The

# Messing about on the water

#### We look at a selection of games with watery themes

delay here is inconsistent, which introduces an element of chance into a game which is otherwise dependent upon manual and intellectual skills.

Although the task of getting a frog across a road and a river to a pool, avoiding hazards on the way, is not timed, it is a good graphical imitation of the real thing.

There are turtles which submerge if you leave the frog on them for too long, so if you're not a quick decision-maker you could take a long time to build up a

Land in a pool containing a fly, and you get bonus points, and when all the pools have frogs in them you get an extra frog and the game speeds up.

instructions	65%
playability	35%
graphics	85%
value for money	60%

#### **River Rescue 48K Spectrum**

Thorn-EMI, Upper St Martin's Lane, London WC2H 9ED

River Rescue is a kind of water-borne Scramble/Penetrator

You have a bird's eye view of a river and its banks which scroll across the screen. Your task is to pilot your motor gun-boat avoid-

ing islands and crocodiles.

If you manage to shoot the crocs you gain points; if you hit them, you sink!

Every now and then you have the opportunity to collect explorers from the north bank and deliver them to the south, and gain more points.

The more explorers you collect, the more the program offers extra scoring facilities; get really good, and two planes start to bomb you in addition!

The game is incredibly fast and furious, as there is no skill level adjustment, which I rate as a disadvantage.

There are other snags too; the boat tends to crash when it's near an obstacle rather than being in contact with it; the animation is rather crude and the sound dull and repetitive.

I suppose I expected a large company like Thorn-EMI to produce a program which was technically superior to those of the small software houses.

The question must be asked: are you paying an extra pound or so for a flash inlay card and large corporate overheads?

instructions	100%
playability	60%
graphics	60%
value for money	60%

#### Ship of the Line Commodore 64 £6.50

Richard Shepherd Software, 3-25 Elmshott Lane, Chippenham, Slough, Berks

Up to now Richard Shepherd has concentrated on the Spectrum, so this program represents an excur-

sion into new fields.

Quite simply, you control a sailing ship and endeavour to gain promotion by sinking or capturing enemy ships. You set sail with a full complement of men, food and complement of men, food and complement of men, for and ammunition and search for

the enemy. One word commands such as go-on, attack, engage, port etc. to manipulate your ship. Enemy ships can be attacked but if you elect not to attack they will pursue

you.

During an attack you can sink

or board the ship and gain points.

Throughout the voyage you are subjected to sundry mishaps such as mutinies, scurvy, bad food and yellow fever. This generally depletes your food, men or both.

It is wise to return to port occasionally to replenish your ship. If, on return to port, you have enough 'hero' points, you will be considered for promotion. Promotion will finally depend on a ridiculously banal test.

Overall, not a wonderful game.
Graphics were mediocre and sound was appalling. The game didn't do justice to the power of

the 64.

Basically a good idea which lacked imagination and thought.

A.W.

	60%
instructions	60%
playability	50%
graphics	60%
value for money	00



#### Angler 48K Spectrum £5.95

Virgin Games, 61/63 Portobello Road, London W11

You have 100 casts to catch as many fish as possible. The fish move smoothly from side to side in 18 rows, and you can move your boat along the surface of the

It is very difficult to catch the fish, because it is hard to cast the

line in the correct position.

To catch the fish in deeper waters, you must also make sure that the line doesn't hit any fish on its way down, otherwise the line reels back, so it's a wasted

I found it practically impossible to catch the deeper fish, even on the easiest of the five skill

If you catch a crab, you lose a point with each cast. However, the smaller version of the meanest-looking fish will eat all your crabs — if you manage to catch one!

Every go you must type in your name — it would be better if you only had to when you get a high score. You can make a printout of the Hall of Fame or Certificate of Merit — they are shown with each score.

It is so difficult to catch the fish

that you tend to lose interest quickly - a bit like real-life fishing.

instructions	80%
playability	35%
graphics	60%
value for money	40%



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Spectrum programs only £6.95 BBC/Electron programs only £7.95 Ask for Stell Software at larger branches of Boots, John Menzies, W. H. Smith and all good computer shops, where most titles are available. Dealers should contact their regular distributors.

Stell Software 36 Limefield Ave, Whalley, Lancs, BB6 9RJ.

# JOYSTICK NTERFA





#### JOYSTICK INTERFACE

The Interface Module II has been specially designed to plug on to the rear connector of your ZX Spectrum or ZX81 and allow you to connect any standard Atari type digital Joysticks. All of the computer's connections are duplicated on an extension connector so that you can still use any other devices intended for use with your computer.

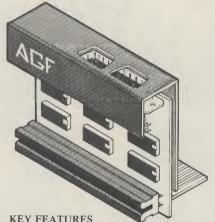
The Interface Module II resides in the same

The Interface Module II resides in the same memory space as the keyboard, which remains fully functional at all times, therefore it will not interfere with anything else connected.

When a suitable joystick is plugged into 'Player 1' socket its action will mimic pressing the cursor keys, up "7", left "5" and so on. The firing button will simulate key  $\phi$ . This unique feature guarantees the best software support.

Take a look at the selection of compatible games we have listed. More are being added all the time as a result of our contact with the various software companies.

A second Joystick may be connected in the 'Player 2' position which simulates in a parallel fashion keys T-Y-U-I-P. This will allow you to play a whole new generation of two player games.



**KEY FEATURES** 

- \* Proven cursor key simulation for maximum software support
- Accepts Atari, Competition Pro, Wico, Starfighter, Le Stick, etc Joysticks
- \* Second Joystick facility
- \* Rear extension connector for all other add-ons

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Slat!

Splat! £4.95 £4.95 Software Ltd £5.50 : Megadodo Pheenix Software £: New Generation £5.50 Escape

£4.95 £5.95 £5.95 Software 3D Tunnel Knot in 3D 27 22 Cyber Rats Silversoft £5.95 COMPATIBILITY CASSETTES £4.95

These cassettes have short programs to

load before the chosen game which will convert it to use the cursor keys and therefore become compatible with the Interface Module II.

Arcadia Schizoids Centipede Planetoids Jet-Pac Hungry Horace Horace Goes Skiing Spectres Penetrator Pssst 3D Combat Zone † Invaders † Will require 48K Memory.

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# Here's how to ease the shock of those bills

Do you find your power bills difficult to believe? Now you can check them — and get the bad news earlier.

My program, for the Dragon 32, works out gas and electricity bills and all you have to do is to follow the prompts.

You will be presented with a menu of three choices: gas, electricity or end of program.

The first is quite straightforward but gas bill calculation is slightly more complex (and confusing) due to the illogical way in which these bills are calculated.

In the south east region, variable G will be .28p (standing charge per week), but other areas may differ.

Look on your gas bill and divide the standing charge by the number of weeks elapsed since the last reading.

Prepare for the worst with A. Lee-Bentley's program for the Dragon. It will work out your gas and electricity bills before the buff envelopes arrive

#### How it works

5-100 display menu

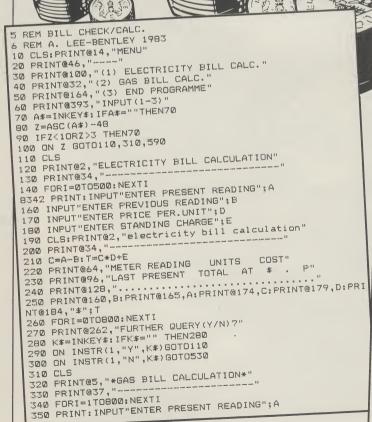
110-180 set variables for electricity bill

190-260 calculate, display result 270-300 further query option prompt (elec)

310-390 set variables for gas bill 400-480 calculates and displays

490-520 further query option prompt (gas)

530-580 return to menu option 590 690 flashing end program message



```
PRINT: INPUT"ENTER PREVIOUS READING"; B
 370 PRINT: INPUT "ENTER WEEKS SINCE LAST READ";D
380 PRINT: INPUT "ENTER PRICE PER THERM";F
390 PRINT: INPUT "ENTER STANDING CHARGE";G
 400 CLS:PRINT@5,"*gas bill calculation*
 410 PRINT@37,"
 420 C=A-B:P=C*F
 430 H=P/D: X=C/D: Y=X/10
 440 J=(G+Y+H)*D
 450 PRINT@65,"METER READING UNITS COST"
460 PRINT@96,"LAST PRESENT USED AT # .
520 ONINSTR(1,"N",IC*)GOTO530
530 CLS
540 PRINT@230, "RETURN TO MENU? (Y/N)"
550 E*=INKEY*: IFE*=""THEN540
550 ONINSTR(1,"Y",E$)GOTO10
580 ONINSTR(1,"N",E$)GOTO600
590 CLS
600 PRINT@204,"THANK YOU *"
610 PRINT@265,"HAVE A NICE DAY*"
620 FORT=0T0400:NEXTT
630 PRINT@168, "******
640 PRINT@200,"*
650 PRINT@232,"*
660 PRINT@264,"*
670
    PRINT@296, "******
680 FORT=0T0400:NEXTT
690 GOT0600
```

LUNAR JETMAN - For the 48K Sinclair ZX Spectrum
LUNAR JETMAN — The Ultimate
Intergalactic G.A.S. (Graphic
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**PSSST** - 19/48K ZX **Spectrum** 





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These games should be available from W.H. SMITHS, BOOTS, JOHN MENZIES, LASKYS, SPECTRUM GENTRES, other large department stores and all good major software retailers.

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**LUNAR JETMAN - 48KZX** Spectrum





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#### SOFTWARE REVIEWS

#### **House of Bugs** TI-99/4A (Extended BASIC. iovstick) £5.95

Temptation Software, 27 Cinque Ports Street, Rye, Sussex

Happily, the only bugs to be found in this program are those to be seen jumping around the screen in the House of Bugs.

The house has a basement, ground, first and second floors and a roof. By controlling your man, one of four, a high score must be obtained by climbing ladders to the upper floors.

Lingering on lower levels results in points being deducted.

When the game starts, the four resident bugs are to be found on

As play progresses, some will

descend the ladders, eager to leap on to your head.

Your only protection is to jump to the ceiling and drop down on the bug as he passes. This will gain bonus points, but once a square of ceiling has been damaged it cannot be used again until re-

Repairs are only carried out when the score reaches 300. For every 600 points gained, the second floor ceiling is repaired and you earn an extra man.

While plastering is in progress the bugs go wild, so whether it's

you or those bugs that are hopping by the end of the game depends on how fast those re-

instructions	90%
playability	80%
graphics	90%
value for money	90%



#### **Road Toad Commodore 64** £8.95

Audiogenic, 34-36 Crown Street, Reading, Berks

No home computer, it seems, is complete without its own version of the arcade favourite, Frogger. This release for the 64 is guaranteed to keep arcade fanatics happy for hours.

For those hermits who have never actually played Frogger, the basic idea is to guide a green frog across a road avoiding fast cars, and through a crocodile infested

To cross the river requires skill, leaping on to moving turtles and

# Playing at the speed of byte

#### This week's roundup of action games for a range of micros

logs, while avoiding the crocs.

As the game progresses, snakes will appear by the road side and attempt to eat your frog, and the pace gets much faster.

Leaping on to a female frog gains bonus points, and once four frogs have been safely housed in the safe areas at the top of the screen, a new sheet begins.

I particularly liked the graphics on this game — the frog moved very realistically. But the instruct-

ions, which assumed that the owner has played Frogger before, were a little confusing.

Anyone who likes Frogger will

find this version extremely satisfying. D.A.

instructions	60%
playability	75%
graphics	95%
value for money	70%



#### **Storm Arrows** Dragon 32 £7.95

Dragon Data, Kenfig Industrial Estate, Margam, Port Talbot, W. Glamorgan

The object of this game is to shoot the deadly arrows that are flying in all directions around a maze.

Tactics are required, however, because "master arrows" appear and lay eggs on the grid.

These eggs hatch as you shoot the last two arrows. If you suc-cessfully clear all the hostile arrows, a new screen is presented

in different colours.

Before play starts, you are asked to input three initials for the high score table displayed at the end of the game. Since I have only two initials, I found that I had to

invent a third one!

A good point is that a new name can be input before each round if required by pressing Enter.

There are many other good features, including on-screen scoring with high score, time and round bonuses, and extra points for certain hits.

The graphics are smooth and fast and the game is fun to play and addictive.

The sound is reasonably good with a satisfying twang when a laser is fired. There are no melodious tunes, though unlike many of the new arcade

instructions	90%
playability	90%
graphics	90%
value for money	90%



#### Barreldrop 48K Spectrum £5.95

Games Machine, Business and Technology Centre, Bessemer Drive, Stevenage, Herts SGI 2DX

An unusual game, written in BASIC, which shows what the Spectrum is capable of without recourse to machine code.

The main section is a variation of Bagatelle. Your character, Gordon, rolls barrels along the roof. When you press space they fall to the ground.

If you press when the barrel is immediately over a drainpipe, you unblock it. Your task is to

unblock five drains.

Sometimes if you miss, Gordon's dog Flash will retrieve the barrel and give you another try.

If you succeed in unblocking all

five drains then you get a "surprise" before the next sheet in the form of an unrelated problem or game, for example, mini Space Invaders.

Colour, sound and graphics are all reasonably well used but un-fortunately for Games Machine, the big boys have set the standards of animation which we expect from a commercial program.

Although this is a competent and enjoyable game, it lacks polish; each of the sections are of the standard of good magazine

But younger children or in-But younger emand enjoy experienced gamers would enjoy R.E. this game.

	80%
structions	60%
layability	59%
raphics	60%
alue for money	00 /



#### Laser Snaker **48K Spectrum** £5.95

Poppy Soft, The Close, Common Road, Headley, Newbury, Berks

I have seen one or two variations of games where a player has to guide a 'snake' round an obstacle course, and this is one of the best I have seen so far.

Although it may seem easy, I

can assure you that it isn at Trainee level, and difficulty 0,

which is my level.

There are 15 sheets or playing areas to get through, and after two hours I managed sheet 9, but my fingers refused to cooperate

As an incentive, there is a prize if you manage to complete sheet 15. If you manage this at speed 9, for expert, and difficulty 4, then I would suggest that the prize is a six month stay in a psychiatric ward to recuperate!

The cursor control keys move the snake round the playing area, and if you should need a rest—and you will—then key P will hold the game for you. Key 0 fires a burst of venom at whatever gets in the way of the snake.

You should have no problems with loading, but I would suggest that you only load this game when you have at least a couple of hours to spare.

Although the graphics are

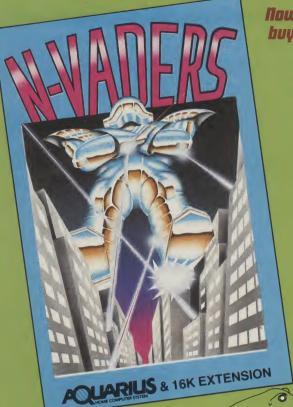
nothing to write home about, the display is pleasing enough, and the snake movement is very

Not too fast, and not too slow. I found it a very playable game. **B.B.** 

nstructions	100%
playability	100%
graphics	75%
value for money	100%



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All the excitement of arcade type action at the low, low price of £5.95.

#### M' Vaders

The classic arcade golden oldie but written in machine code for fast, exciting action. Pit your wits and skills against squadrons of coloured weirdos. Blast them all from the sky – but beware, they get faster and meaner.

#### **Ed'on**

Eat the dots and avoid the planes to win through. An updated version of the addictive arcade game. Accelerate, decelerate, dodge and change lanes. If you manage to avoid destruction you go on to higher things.



A leap in front of all other versions – an arcade quality game with truly amazing graphics. Hop skip and jump across all the dangers and perils. Take your life in your controls to reach safety.

#### Aliens

You are one of the chosen 'Gatherers' selected by your unique abilities and talents. Probe the mysteries of the 'past times' building. Gather the secrets of the Universe. Have you the mental strength to survive and the character to win?

#### Chuckman

Based on the ever-popular arcade game with extra extras. Find the quickest route, avoid the meanies and defuse the time bombs to win the day. But beware, this game is addictive, you'll risk sleep and peace of mind.



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### **Turning** turtle

Turtle graphics — without a Super Expander? Alan Wilburn explains how it can be done and on any VIC-20 with 3K or 8K memory expansion

The lack of the necessary graphics commands and the cost of a Super Expander cartridge inspired this program to allow high resolution drawing on the VIC-20. Before starting to write the program, I decided to meet two requirements.

Firstly, the program had to draw complex shapes using a minimum of commands, with the emphasis on ease of use. Secondly, the program had to be compatible with both 3K and 8K

memory expansion.

The first requirement was easily met by using the 'turtle' technique. This is an imaginary pen that can be moved around the screen with two simple commands — turn (x) and draw (x). By repeatedly using these commands, complex shapes could easily be programmed.

At first, the second requirement seemed harder to meet. The high resolution screen uses most of the user RAM from \$ 1000 to \$ 1E00, so storing the program in the 3K expansion area would have made it inaccessible to. machines with only 8K expansion

and vice versa.

The solution was to reduce the size of the high resolution screen and store the VICPEN routines just below the normal screen location from \$1C00 to \$1E00, making it accessible to VICs with either 3K or 8K expansion (see Figure 1).

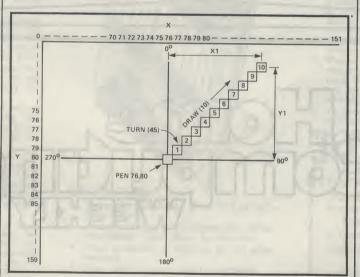
The program itself assigns four extra commands to VIC BASIC. Listed below is a brief description

of each command.

VICPEN switches on the high resolution screen and points the pen upwards ready to draw

**PEN X,Y** (x = 0 to 151 Y = 0 to159) sets the start position for the draw command and can also be used to plot an

individual pixel. TURN (X) ( $\dot{X} = 0$  to 255) turns the pen through X degrees from its current direction. Greater angles than 255° can be programmed by using the command twice, ie. TURN (0): TURN (90) = 270°



TURN (0) returns the pen to the UP direction from any direc-

DRAW (X) draws a line of length (x) in the direction determined by the command TURN (x). The value of X defaults to screen limits (151 and 159).

Consider the Demo 1 program along with its graphical representation in Figure 2.

The start co-ordinates of the pen are stored in addresses \$F8 and \$FC by the command PEN 76,80. The turn routine converts the 45° angle to radians and stores the result in the floating point store. The Sine and Cosine of the angle are then calculated and also stored as floating point numbers.

The results of these calcula-

tions produce the offsets X1 and Y1 which when added to the current X and Y values produce the new position of the pen.

The draw routine merely adds the value of the offsets X1 and Y1 to the X and Y values as many times as determined by the command DRAW (10).

After entering the program, it should be saved before it is run as any errors may hang up the computer. The program will run on any expanded VIC.

However, if more than 3K expansion is fitted, then the VIC should be reconfigured by POKE 642,32: POKE 648,30: SYS 64824 before loading and then omit lines 10 and 20

Demo 2 and Demo 3 are two short routines which demonstrate

how the commands are used to draw simple shapes. Line 100 prevents the Ready message from corrupting the display. Pressing any key will return the VIC screen to normal.

#### Graphic representation of Demo 1

where  $A = Angle = 45^{\circ}$  and L =Length = 0then X1 = INT (sin (A) \*L + 0.5)X = X + X1Y1 = INT (cos (A) \*L + 0.5)Y = Y - Y1

Demo 1 (draws a line from center of screen at an angle of 45°)

10 VICPEN 20 PEN 76,80 30 TURN (45) 40 DRAW (10)

The high resolution screen consists of 152 x 160 plottable points where x = 0 to 151 and Y = 0 to

#### Figure 1

8K expansion	\$ 2000
Normal video RAM	\$ 1E00
VIC-PEN	\$ 1C00
High resolution screen	\$ 1000
3K expansion	\$ 0400

#### Demo 2 draws square

10 VICPEN
20 PEN 76,80
<b>30</b> TURN (90): DRAW (40)
40 TURN (90): DRAW (40)
50 TURN (90): DRAW (40)
60 TURN (90): DRAW (40)
100 WAIT 198,7: SYS12

#### Demo 3 draws cube

investigation
10 VICPEN
20 PEN 60,60
30 FOR $X = 1$ to 15
40 READ A
50 TURN (A): DRAW (40)
60 NEXT
100 WAIT 198,7:SYS12
110 DATA 90,90,90,90,45,45,90,
45,135,45,135,90,90,180,45

#### **VIC-20 PROGRAM**

10 POKE56, 28: POKE55, 0
20 POKE52, 28: POKE51, 0
30 FORX=7660T07679: READA: POKEX, A: NEXT
40 FORX=673T0767: READA: POKEX, A: NEXT
40 FORX=7168T07338: READA: POKEX, A: NEXT
70 SYS7660
80 FORX=7339T07679: READA: POKEX, A: NEXT
90 NEW
100 DATA162, 7, 189, 248, 29, 157, 4, 3, 202, 16
110 DATA247, 96, 0, 28, 82, 28, 133, 28, 134, 206
110 DATA67, 79, 76, 79, 85, 210, 68, 82, 65, 215
130 DATA67, 79, 76, 79, 85, 210, 68, 82, 65, 215
130 DATA84, 73, 205, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
150 DATA84, 73, 205, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
160 DATA128, 64, 32, 16, 8, 4, 2, 1
170 DATA64, 22, 224, 22, 128, 23, 32, 24, 192, 24
180 DATA64, 22, 224, 22, 128, 23, 32, 24, 192, 24
190 DATA64, 22, 224, 22, 128, 23, 32, 24, 192, 24
200 DATA96, 25, 0, 26, 160, 26, 64, 27
210 DATA211, 28, 240, 22, 189, 173, 2, 240, 39, 48
240 DATA201, 128, 240, 22, 189, 173, 2, 240, 39, 48
240 DATA201, 128, 240, 22, 189, 173, 2, 240, 39, 48
240 DATA201, 128, 240, 22, 189, 173, 2, 240, 39, 48
250 DATA3, 232, 208, 246, 230, 11, 164, 177, 165, 211
260 DATA185, 251, 1, 232, 208, 224, 166, 177, 165, 11
260 DATA180, 96, 8, 201, 255, 240, 42, 36, 15, 48
290 DATA180, 96, 8, 201, 255, 240, 42, 36, 15, 48
290 DATA180, 96, 8, 201, 255, 240, 42, 36, 15, 48
290 DATA182, 273, 160, 255, 202, 240, 8, 209, 185, 173
310 DATA132, 73, 160, 255, 202, 240, 8, 209, 185, 173
320 DATA23, 201, 204, 144, 34, 40, 56, 233, 203, 170
310 DATA132, 73, 160, 255, 200, 185, 173, 2, 48
320 DATA2, 16, 250, 48, 245, 260, 185, 173, 2, 48
330 DATA5, 32, 210, 255, 208, 245, 76, 239, 198, 40
330 DATA233, 201, 255, 208, 245, 76, 239, 198, 40
330 DATA233, 201, 255, 208, 245, 76, 239, 198, 40
330 DATA233, 201, 255, 208, 245, 76, 239, 198, 40
330 DATA233, 203, 10, 168, 185, 162, 2, 72, 185, 161

370 DATRA2, 72, 76, 115, 0, 32, 121, 0, 76, 231
380 DATRA199, 162, 0, 160, 16, 24, 32, 153, 255, 169
390 DATRA30, 133, 254, 134, 253, 138, 168, 72, 162, 19
400 DATRA145, 253, 24, 105, 10, 200, 208, 2, 230, 254
410 DATRA202, 208, 243, 104, 24, 105, 1, 201, 11, 208
420 DATRA232, 169, 147, 141, 2, 144, 169, 21, 141, 3
430 DATRA144, 169, 252, 141, 5, 144, 160, 0, 173, 134
440 DATRA2, 153, 0, 150, 153, 0, 151, 200, 208, 247
450 DATRA169, 16, 133, 254, 132, 253, 152, 162, 12, 145
470 DATRA253, 200, 208, 251, 230, 254, 202, 208, 246, 16
480 DATRA253, 200, 208, 251, 230, 254, 202, 208, 246, 16
480 DATRA29, 169, 251, 138, 208, 4, 133, 250, 133
490 DATRA29, 169, 251, 32, 145, 211, 32, 15, 220, 160
510 DATRA29, 169, 251, 32, 145, 211, 32, 15, 220, 160
510 DATRA29, 169, 251, 32, 104, 226, 160, 2, 162, 205
520 DATRA32, 215, 219, 160, 29, 169, 246, 32, 162, 219
530 DATRA32, 27, 226, 160, 2, 162, 200, 32, 215, 219
540 DATRA62, 219, 169, 205, 160, 2, 32, 77, 216
570 DATRA32, 170, 209, 192, 152, 144, 2, 160, 151, 132
580 DATRA251, 169, 236, 160, 29, 32, 215, 219, 169, 200
690 DATRA29, 32, 215, 219, 32, 73, 216, 32, 170, 209
690 DATRA192, 160, 144, 2, 160, 159, 132, 252, 208, 13
630 DATRA29, 32, 215, 219, 32, 73, 216, 32, 170, 209
690 DATRA192, 160, 144, 2, 160, 159, 132, 252, 208, 13
630 DATRA215, 134, 251, 134, 251, 132, 253, 206, 32, 158
640 DATRA192, 150, 144, 2, 160, 159, 132, 252, 208, 13
650 DATRA192, 150, 144, 2, 160, 159, 132, 252, 208, 13
650 DATRA192, 150, 144, 2, 160, 159, 132, 252, 208, 13
650 DATRA192, 150, 144, 2, 160, 159, 132, 252, 208, 13
660 DATRA192, 150, 144, 251, 32, 253, 206, 32, 158
660 DATRA192, 150, 144, 251, 32, 253, 206, 32, 158
660 DATRA192, 150, 144, 251, 32, 253, 206, 32, 158
660 DATRA192, 150, 144, 251, 32, 253, 206, 32, 158
660 DATRA193, 138, 164, 251, 32, 145, 211, 162, 241, 160
670 DATRA199, 138, 164, 251, 32, 145, 211, 162, 244, 160
680 DATRA29, 32, 215, 219, 169, 0, 164, 252, 32, 145
690 DATRA20, 0, 135, 320, 0, 0, 135, 240, 0
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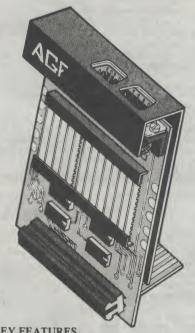
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# Alien ncount

#### Our reviewers guide you through some software encounters of the cosmic kind

#### **Cylon Attack** 32K BBC £7.90

A&F, 830 Hyde Road, Gorton, Manchester M18 7JD

The term "state of the art" is much over-used in computing, and you should rightly feel sceptical when it is used without thought.

I have thought for quite a while before deciding to describe this game as a state of the art offering.

My reasons for giving it such an accolade are many, but basically it comes down to this. I have never seen a better thought out and executed game — nor am I likely to see such an original idea for some time to come.

The aim of the game is the obliteration of various types of alien. I've heard this before, you say, but wait.

The aliens appear in an excel-

lent three-dimensional repre-

#### Bitmania **Commodore 64** plus joystick £6.95

Virgin Games, 61 Portobello Road, London W12

This game is hopeless.

The instructions rabbit on about neuron flows through the Commodore 64 and other such silliness. The game itself is nothing to shout about, and involves a tiny Space Invaderstype of laser base shooting at dots that come whizzing down the screen.

The screen is cluttered by these "neurons" that travel down the screen messing up the display.

The sound is boring, and the graphics are unimaginative and plain.

Apart from this there is not much to say, as the game is very

The instructions are to Virgin's usual high standard of packaging.

In this day and age, programs like this are just not on — the software-buying public has come to expect more.

Virgin has done better, so why does it have to push this on to the market?

With its flashy packaging and colour pictures on the inlay card, it will undoubtedly sell, but when you see the program working what a let-down.

instructions	70%
playability	5 %
graphics	10%
value for money	1 %



sentation before your very eyes. You can move in four directions while they dodge and weave in front of you.

The effects - both sound and vision - are most realistic, and the game can even make you feel motion sick if you play it for long enough.

After the annihilation of each wave, you have to dock with the mother ship before the next wave

Look out for the Tardis as you manoeuvre, and don't shoot the Doctor (he doesn't score anyway!). D.C.

instructions	80%
playability	100%
graphics	100%
value for money	100%

#### **Brain Damage** Spectrum

Silversoft, London House, 271/273 King St, London W6

Brain Damage is a rather weird game, similar to the 'tanks' level in the arcade game Tron.

You have to wander around many levels of mazes, shooting up many different types of alien.

The action all takes place inside the brain of the computer, from what I can work out, and, in the style of Imagine and Ultimate, there is a witty little introduction to set the scene.

For example, the first line reads: "I was just hanging around, on standby as it were; logic levels at an all time low, my printed circuit bored - my keys depressed. Then you came along".

Brings tears to your eyes, doesn't it? The game itself is rather good, actually. Smooth colour graphics and effective use of sound help no end.

It took me a while to get used to the controls, my firing wasn't brilliant and I couldn't get past the third level.

This game takes some skill to play, not just another fire-like-mad-and-you-might-make-thetwenty-seventh-level game. P.S.

instructions		87%
playability		95%
graphics		90%
value for mo	ney	94%



# Robopods TI-99/4A £6.95

Virgin Games, 61/63 Portobello Road, London W11

An alien spaceship has descended to earth and has beamed down the dreaded Robopods with the intention of destroying our beloved

You are assigned the task of deactivating the fiendish machines before they self-destruct and blow the whole shooting match to

kingdom come.
The pods are rendered harmless by climbing up inside them from underneath, but there are a few snags which tend to make life far from simple.

The robopods are all numbered and they must be deactivated in

As you make your panic stricken way from one pod to another, you leave a trail of radio-

active footprints which spell certain death if you pass back over your tracks.

As if that wasn't enough, the ground between each pod is littered with landmines laid by the

alien spacecraft.

Stay in one spot for too long, and the pods will blow up anyway.

The only assistance you get is an occasional mat placed over part of your previously laid trail, enabling you to cross your path. There are five levels of dif-

Robopods is a good, well pro-

grammed game with excellent graphics and sound. I found it very entertaining.

90%	0
80%	0
900	70
900	70
	80% 90%



#### Startrek 3,000 **48K Spectrum** £4.95

dk'tronics, 23 Sussex Road, Gorleston, Gt. Yarmouth, Norfolk

It would be nice if Scotty could beam you up when you hit a bad patch, but that is one of the few options not allowed in this full version of the old 'Startrek'

you get is old pointy ears saying "I am sorry Captain, but your order seems illogical — it must be the stress". If you do something silly, all

There are plenty of stress moments, flying a starship by the instruments and view on space provided by the scanners, especially when the Klingons are closing

I panicked so much, I actually drove the Enterprise into a star. didn't 'alf upset Spock.

A Help function is provided to itemise the numerous orders to the onboard computer — very helpful, I used it a lot.

With practice, I believe you could become quite adept at controlling the ship and perhaps somewhere in the program, there might be a compliment Spock waiting to get out!

All in all, a competent rendering of a classic game which gives a good impression of how one imagines it would be like, running a starship from the inside. M.B.

instructions	95%
playability	95%
graphics	90%
value for money	90%
value for money	





A professional modem, now with universal couplings, at only an eighth of the price - designed specifically for use with home computers.

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an optional extra. (Limited to resolution of 64 x 32 for screen contents in black and white only and selected data.)

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The price includes the modem, ZX81 and Spectrum software on cassette, connection cable and operating instructions, with a 12 month

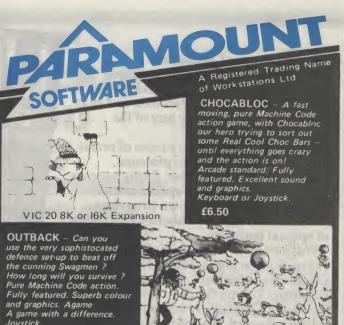
There are no hidden extras, making the Micro-Myte 60 an ideal gift for the enthusiast.

Interface software (ZX81 to Spectrum and vice versa) — £9.50 (inc. VAT).

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Commodore 64

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Fizzbuzz is a simple game which tests your mental agility.

All you have to do is to count from 1 to 100, rather rapidly. That sounds easy enough, but each time you come to a number that contains a 5 or is divisible by 5 (such as 25 or 56) you must say fizz instead.

And each number that contains a 7 or is divisible by 7 you replace with buzz.

If a number qualifies for both (such as 35 or 57), then you say fizzbuzz.

The program, which is written in ZX81 BASIC, keeps track of the score, but doesn't give you long to think.

So RUN the program, press NEW LINE to start, and . . . if you want your next go to be a number, press 1. If you want fizz, press 2, buzz 3, and fizzbuzz 4.

If all is well, the program prints

your answer, and goes on. If not, you get two asterisks, the right answer, and straight on to the next go.

If you get really good, you can shorten the response time in line 170. Or if you get in a complete tangle, you can allow yourself longer.

When you are getting on top of 5 and 7 you can change them; try replacing 5 with 3 in lines 20, 410 and 440.

# How quick

Ever played the party game Fizzbuzz? Now Peter Scott has written a version that you can play against your ZX81



#### Main variables

N\$ stores the current number S the score

A\$ the answer suggested by the player

N dummy, used in calculating whether a number is divisible by, or contains, 5 or 7

dummy

X,Y record whether a number is divisible by, or contains, 5 or 7

#### How it works

10-100 give instructions, and print the title

110-120 initialise the variables

130-160 calculate whether the number is divisible by, or conrains, 5 or 7 by calling sub-routines 400 and 500. The result is stored in Y: 1 for neither, 2 for 5, 3 for 7, and 4 for both

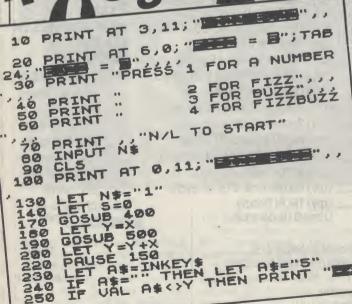
170-200 reads the player's input, and decides whether it is correct; it prints two asterisks

210-250 keeps the score, and

prints the correct answer
260-280 increases N\$ by one,
checks for the end of the game, and recycles back to

400-460 is a subroutine which checks whether N\$ is divisible by, or contains, 5

**500-560** does the same for 7 600 prints the score out of 100



THEN L PRINT PRINT PRINT PRINT 発記 25789999 UAL Y=12 Y=3 Y=3 LET N\$=501"

IF N\$="101"

IF N\$="101"

GOTO 160

LET X=1

LET N=(UAL THEN N\$) /5

LET N=INT TO LEN N\$

IF N=INT TO LEN N\$

FOR Z=1

FOR Z=1

IF N\$

IF N\$

IF X=2 LET X=1 LET X=1 LET N=(UAL THEN LET X=2 IF N=INT TO LEN N\$ FOR Z=1 IF N\$ (Z) ="5" NEXT Z RETURN LET X=0 LET N=(UAL THEN LET X=2 LET N=(UAL THEN N\$ LET X=2 IF N\$ (Z) ="7" THEN LET X PRINT AT 21,0; "SCORE = PRINT AT 21,0; "SCORE = PRINT AT 21,0; "SCORE = 0" 310 330 4410 4420 4450 450 50 500 510 520 500



#### SPECTRUM PROGRAMS

# Escape the outshoot the outlaws

#### Apeman

Shipwrecked on the wrong side of Apeman's island, the 15 survivors must cross the island to the safety of the village.

But Apeman is enraged by their presence on his land and is after them

You must guide the survivors

across the island three at a time, across the marshlands, through the bush and across the river.

You are faster than the Apeman in the open, but slower through the bush and across the marshland. The river will wash you down stream and maybe out to sea. Beware of the snakes.



#### Outlaws

So you think you're fast with a gun. But are you fast enough? Red Jake and his gang of five outlaws are out to get you.

You enter the town from the west, slowly stalking along the streets. You see your first man to your right. He turns. You turn. I

The first shots are fired...
There are five controls. 5 turns left. 6 turns round. 7 moves forward. 8 turns right. 0 shoots.

As you wander round the streets, you will only see the outlaws in the same street as yourself. The outlaws are randomly repositioned to make it

#### How it works

130-140 turn the lawman left or right, and line 160 draws the ight man

200-298 check to see if any outlaws are in view and then print

300-380 turn the outlaws to face you if necessary and then shoot

#### **Variables**

k no of dead outlaws y,x position of lawman a,b direction of lawman a\$ contains man a(n),b(n) position of outlaws C(n),d(n) direction of outlaws e(n) delays outlaws one move s no of shots left

#### **SPECTRUM PROGRAMS**

Listing 1 — Apeman

APE MAN c.stock 1983 Graphics. A=A B=B C=C 10 =0 D 30 FOR n=0 TO 31: READ a: POKE USR "A"+n,a: NEXT n 45 DATA 24,24,255,255,189,189, 6,102 36 ,102 50 DATA 24,24,60,90,153,24,36, 66 DATA 0,6,6,12,24,28,20,116 DATA 24,24,126,126,24,24,24 PAPER 4: CLS ; "INVERSE 1; " B You must g
d people acros
to the vIlla
Watch out
not tread on 140 PRINT AT 16,0;" USE CUrsers

140 PRINT AT 16,0;" USE CUrsers

150 Select mann"; AT 18,0;"

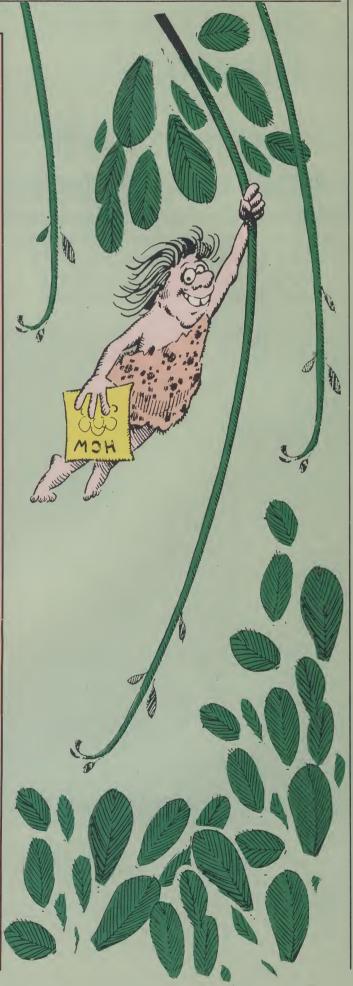
150 PRINT AT 20,9; PAPER 4;"Pre

150 PRINT AT 20,9; PAPER 8

150 PAPER 7: CLS : PAPER 8

180 PAPER 9

180 P H"
250 LET r=0: LET p=1: LET a=4:
LET a(2)=6: LET a(3)=8: LET b=0
LET b(2)=0: LET b(3)=0
270 PRINT AT a,b;"B";AT a(2),b
2);"C";AT a(3),b(3);"C"
290 GO TO 500
301 PRINT AT a,b;"C" 310 LET a=a(p): LET b=b(p)
380 PRINT AT a; "B"
5801 IF INKEY\$="1" THEN IF a(1) <
>220 THEN LET p=1: GO TO 301 a(2) <
>510 IF INKEY\$="2" THEN IF a(2) <
>510 IF INKEY\$="3" THEN IF a(3) <
>220 THEN LET p=3: GO TO 301
520 IF INKEY\$="3" THEN IF a(3) <
>220 THEN LET p=3: GO TO 301
520 IF INKEY\$="3" THEN LET y=y
-1: GO TO 650
601 IF y>0 AND z=0 THEN LET y=y
-1: GO TO 650
605 IF ATTR (a,b)=32 OR ATTR (THEN LET y=3)
605 IF ATTR (a,b)=40 THEN LET z=0
605 IF INKEY\$="5" THEN LET z=0
605 IF INKEY\$= THEN LET z=0
605 IF INKEY\$= THEN LET z=0
605 IF INKEY\$= TH 1 620 INKEY\$="6" THEN LET IF a = a +630 IF INKEY \$= "7" THEN LET 1 640 INKEY\$="8" THEN LET IF b = b + 1640 IF INKEY\$="8" THEN LET 6=6+
1645 IF a < 0 OR a > 21 OR 6 < 0 OR 6 >
31 THEN LET a = c: LET 6 (P) = 6
650 LET a (P) = a: LET 6 (P) = 6
652 IF SCREEN\$ (a,6) = "8" OF THEN PRINT AT c,d;"
": LET a = 22: GO TO 1200
": LET a = 22: GO TO 1200
": LET a = 22: GO TO 1200
": LET a = 21 AND 6 = 31 THEN GO TO 1200
1600 IF a = 21 AND 6 = 31 THEN GO TO 1200
1701 IF RND < .2 THEN GO TO 300
1701 IF RND < .2 THEN GO TO 300
1703 BEEP .02,0: IF ATTR (\$ 3 THEN GO TO 800
1704 LET 20 = 0
1705 GO TO 730 710 LET s=s-1+2\*(a)s): GO TO 76 Ø 0 774450 7745050 8815 8811 2010 IF t=b THEN GO TO 710
IF s=a THEN GO TO 750
IF RND x.5 THEN GO TO 710
LET t=t-1+2\*(b>t)
PRINT AT U, y;" "; AT s, t; "A"
LET U=s: LET V=t
IF a=s AND b=t THEN GO TO 1 ET a 0 IF a(1) =s a(1) =22: GO



1201 GO SUB 1301

1210 LET a (p) = 22, 31; INK 2; "X"

1240 IF a (1) <> 22 THEN LET p = 2

1250 IF a (2) <> 22 THEN LET p = 3

1260 IF a (3) <> 22 THEN LET p = 3

1270 LET r = r + 1: IF r = 3 THEN GO

1401

1280 GO TO 310

1301 FOR n = 1 TO 20

1310 PRINT AT 21,5+n; OVER 1; a \$ (n)

1310 PRINT AT 21,5+n; OVER 1; a \$ (n)

1315 BEEP .05,27

1320 PRINT AT 21,6; OVER 1; a \$ (n)

1330 PRINT AT 21,6; OVER 1; a \$ (n)

1340 LET r = r a + 1: IF r a = 5 THEN GO

1350 RETURN

14401 LET r = r a + 1: IF r a = 5 THEN GO

1400 GO TO 250

1501 PAPPER 6: PRINT AT 9,2; INVER CO

1505 PAPPER 6: PRINT AT 9,2; INVER CO

1506 PAPPER 6: PRINT AT 9,2; INVER CO

1507 PAPPER 6: PRINT AT 9,2; INVER CO

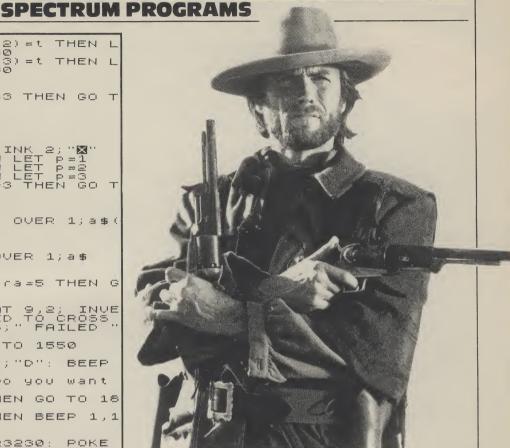
1508 PAPPER 6: PRINT AT 9,2; INVER CO

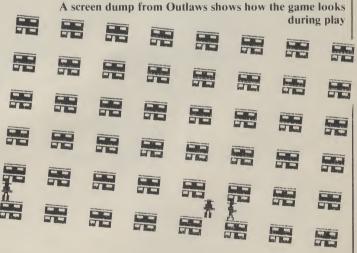
1509 PAPPER 6: PRINT AT 9,2; INVER BEEP .05,27

NEXT n
PRINT AT 21,6; OVER 1;a\$

LET rb=rb+1
RETURN
LET ra=ra+1: IF ra=5 THEN G
1501
GO TO 250
PAPER 6: PRINT AT 9,2; INVE
L;" ALL HAVE TRIED TO CROSS
AT 12,2;" A ";rb;" FALCED " 1505 IF rb=0 THEN GO TO 1550 1510 FOR n=1 TO rb 1520 PRINT AT 12,14+n;"D": BEEP •5,0: NEXT n 1550 PRINT AT 15,2;"Do you want another GO (Y/N)" 1560 IF INKEY\$="y" THEN GO TO 18 1560 17 0 15 70 IF INKEY\$=""" "" "" 23230: POKE 15 80 GO TO 1560 2010 FOR n=22528 TO 23230: POKE 1,32+24\*(RND<.6): NEXT n 2060 FOR n=1 TO 4: LET a=RND\*17: LET b=RND\*19+3 LET b=RND\*19+3 2070 FOR m=1 TO 4: PRINT AT a+m, b; PAPER 6;" ": NEXT m: NEXT m: NEXT m: NEXT m: NEXT n 2101 LET a=RND\*20+6 2110 FOR n=0 TO 21: PRINT AT n, a ; PAPER 5;" ": NEXT n







Listing 2 — Outlaws

#### **SPECTRUM PROGRAMS**

)/4) = (y+2)/4 THEN PRINT AT a(n),
b(n); INK 2;a\$(c(n)+3,d(n)+3);AT
a(n)+1,b(n);a\$(c(n)+3,d(n)+4):
GO TO 300
230 IF b(n) = x THEN IF INT (x/4)
= x/4 THEN PRINT AT a(n),b(n); IN
K 2;a\$(c(n)+3,d(n)+4): GO TO 34
0
240 LET e(n)=0: PRINT AT a(n),b
(n);"";AT a(n)+1,b(n);""
250 NEXT n
260 FOR n=1 TO 10: NEXT n
298 GO TO 100
301 REM GUNfight
ABS (x-b(n)+3)+1 THEN GO TO 1450
n)+1: IF e(n)=2 THEN GO TO 1450

320 LET d(n) =2: IF x (b(n) THEN LET d(n) =-2
330 GO TO 250
340 IF c(n) \*(y -a(n)) >0 THEN IF
ABS (y -a(n)) <14 THEN LET e(n) =e (n) +1: IF e(n) =2: IF y <a(n) THEN SO TO 1450
360 LET d(n) =0: IF y <a(n) THEN LET c(n) =-2
380 GO TO 250
401 REM GUN
404 IF s=0 THEN GO TO 205
405 BEEP .02,12: BEEP .1,24: LE
T s=s-1
408 FOR n=1 TO 5
410 IF SCREEN\$ (y +a \*n, x +b \*n) <>"
420 NEXT n
450 FOR m=1 TO 6

1410 PRINT AT 10,9; FLASH 1; PAP ER 3; INK 6;" YOU HAVE WON "; AT 11,7;" AGAINST ALL ODDS " 1420 FOR n=1 TO 40: BEEP .05,RND \*20+n: PAUSE 2: NEXT n: GO TO 14 80 1450 FOR n=1 TO 3: BEEP .02,12: BEEP .1,24: NEXT n: PRINT AT 9,X
1455 PRINT AT 7,11; FLASH 1; PAP
ER 2; INK 6;"YOU LOST "; AT 8,5;
"AGAINST HOPLESS ODDS "
1460 PRINT AT 11,6; PAPER 4;"YOU
KILLED "; k;" OUTLAWS"
1468 IF \$=0 THEN PRINT AT 14,5;
1468 IF \$=0 THEN PRINT AT 14,5;
1470 FOR n=1 TO 5: BEEP 1,RND\*10
1480 PRINT AT 19,5;"Press any ke
9 to continue"
1490 IF INKEY\$="" THEN GO TO 149

1495 GO TO 1000

1901 REM INTRODUCTION

1910 BORDER 4: PRINT AT 5,8;"

UT A U S

1920 PRINT AT 8,0;" Red Jake and his gang have cometo release the eir man from your custody. Can you the Lawman, killall six first 1930 PRINT AT 14,5; Press 7 to move forward": PRINT TAB 5;"Press 6 to turn round": PRINT TAB 5;"Press 5 to turn left": PRINT TAB 5;"Press 8 to turn right": PRINT TAB 5;"Press 8 to Surn FRINT TAB 5;"Press 9 to She CO DD EE FF.GG HH IJIJ KK LL 2001 FOR n=0 TO 95: READ q: POKE USR "A"+n,q: NEXT n 2020 PAUSE 0: GO TO 1000

PAT 100 PAT 144 PAT 144 PAT 175 PAT 17 PAT 144 PAT 17 PAT 144 PAT 17 PAT 145 PAT 17 PAT 18 PAT 1

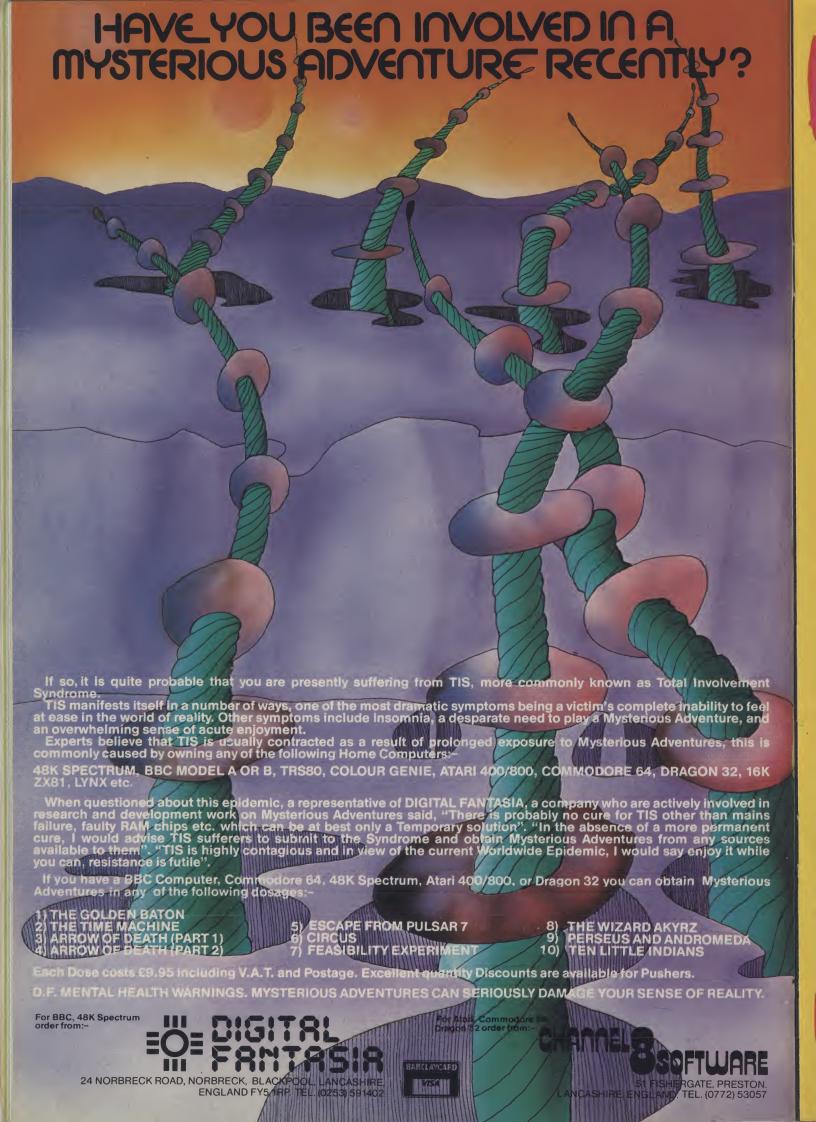
1495 GO TO 1000

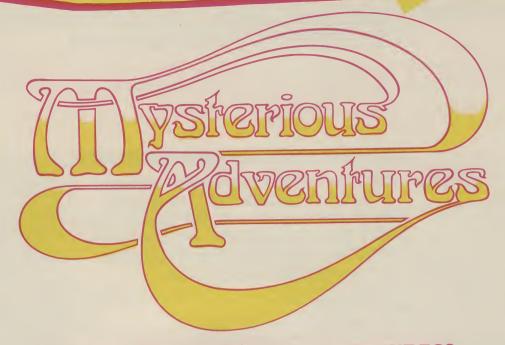
1901 REM INTRODUCTION

1910 BORDER 4: PRINT AT 5,8;"

170 PRINT AT 8,0;" Red Jake and his gang have cometo release their man from your custody. Can you the Lawman, killall six first 1930 PRINT AT 14,5;"Press 7 to move forward": PRINT TAB 5;"Press 6 to turn round": PRINT TAB 5;"Press 6 to turn right": PRINT TAB 5;"Press 8 to t







#### WHAT ARE MYSTERIOUS ADVENTURES?

MYSTERIOUS: (Adjective):- "Baffling, full of mystery, strange or unaccountable".

ADVENTURE: (Noun):- "An enterprise full of risk or danger, an experience of unforeseen events endangering the participants life, a gamble on failure or success".

To start play on a MYSTERIOUS ADVENTURE is to take a step out of the world of reality and into the world of dreams. Your computer is your guide on these fantastic journeys in time and space where danger is ever present and solutions to problems seldom come easy.

By typing in simple commands in plain English you can "talk" to your computerised guide and tell it what your next actions are to be.

MYSTERIOUS ADVENTURES bring a frightening reality to the surreal situations in which you will find yourself. You will become involved in these strange worlds of the imagination, you will feel anger when things seem to be moving against you, you will feel elated when you overcome obstacles that are set in your way. Eventually you will feel overjoyed as you reach the climax of your mission and success is yours.

Any MYSTERIOUS ADVENTURE is not a mission to be taken lightly, success will never be instant – just as Rome was not built in a day, so each Adventure can rarely be completed in one session. To this end a "SAVE GAME" feature has been incorporated in each of the Adventures. This means that at any given time during play of an Adventure, you can store on tape your precise whereabouts, your equipment carried, and any other pertinent details about your present status.

#### **NEW DEVELOPMENTS ON MYSTERIOUS ADVENTURES**

Over the past few years, Adventure programs on Computers have almost always been presented in the classic "Text only" mode. For most Adventure players this has indeed been the way they prefer to play Adventures. The mental imagery generated by such an approach is limited only by the player's own imagination. One of the main reasons for the "Text only" approach has been the lack of hardware capabilities with regard to Graphics resolution – Pictorial Adventures could at best be only very limited in scope.

This situation is changing now however, and Brian Howarth, author of the MYSTERIOUS ADVENTURES series, has spent many hours incorporating Graphics into the Adventures. By working in close conjunction with Jon Blacow, a professional Artist, Brian has produced a series of extremely vivid and imaginative Adventures. Each MYSTERIOUS

ADVENTURE now features, in addition to the Text description, pictorial "views" of your current location and surroundings. As you enter each new location, a high resolution, colour picture is rapidly drawn. The effect of this is to bring much more reality to the Scenario, you can actually see the situation you are faced with and act accordingly. It must be stressed that each picture has been designed so that it will enhance, rather than conflict with your mental imagery. At the single stroke of a key, you can erase the picture and carry on with your Adventure in text only if this is your preference. We are confident that no other Adventure programs can boast such breathtaking realism and imagination combined with the flexibility and ease of play that have made MYSTERIOUS ADVENTURES such a phenomenal worldwide success.

In addition, the Adventures now features full sentence decoding as standard. These mean that you are no longer restricted to inputting single or two-word commands. You can now type in whole sentences in more or less plain English. Your computer will quickly analyse the sentence and perform a whole string of your commands. Just another feature designed to maximise your enjoyment of these world beating games!



The "New style" MYSTERIOUS ADVENTURES are currently available for the 48K SPECTRUM, COMMODORE 64. More releases are planned this year which will include DRAGON 32, ORIC-1, APPLE II & IIe, ATARI, LYNX, MATTEL AQUARIUS, IBM PC etc. Please write or phone for availability.

This game was written on the ZX81, but with the Spectrum in mind. The program will run on both computers as it stands, but with a little thought many improvements can be made for the Spectrum — colour, sound, UDG for character (0 in the listing) etc.

The idea is simple, move from the bottom of the screen up through the grid to collect the treasure at the top (perhaps a UDG on the Spectrum?)

Meanwhile your presence on

#### Hints on conversion

I specifically wrote this game using standard characters in order to enable conversion. A few other points to note:

DIM F\$ (6,32) most BASICs

accept and require only DIM F\$(6), the 32 is the length of each element and is the length of the Sinclair screen. You will need: LET F\$(6) = "32 spaces" added to your program

INT (RND\*20+6) produces a random number between 6

Line 90 Most BASICs need LET MID\$ (F\$(I),INT (RND\*20

INKEY\$ lines 400/410: probably need to replace by a previous line G\$=INKEY\$ and as Sinclairs return 1 for true and 0 for false, you may have to change the signs if your machine returns -1 for true. Also statements "IF L" may have to be written in full (if L (greater than, less than) 0 etc.) Note: A\$ needs to have as many characters as F\$(6) - 32 in listing - pad out with extra

spaces
L.425 replace A\$ (X1+1) with
MID\$(A\$,X1+1,I)
L.440 replace F\$ statement by
MID\$(F\$(INT((Y1+1)/3)),
X1+1,I) Print at Y,X;
Positions print at Y,X; Positions print at row column X

#### Variables

A(17) holds present position of the "door" on each line F\$(6,32) 1-5 are the grid lines: 6 is 32 spaces to wipe a line

HS high score

C rightmost column

B leftmost column

S score

Y character's vertical position

X character's horizontal position A\$ holds characters to be salvaged (or rescued)

Z flag: 0 if not carrying item: 1 if

item carried
X1/Y1 temporary variables of next position vertical screen position

D/E Prod movement variables

**Treasure can be yours unless** you're trapped by the doors. Ray Elder's game is for both the ZX81 and Spectrum. He includes tips to enhance the program for the Spectrum

the floor may trigger the doors | which close in on you. Speed and planning are necessary to achieve the highest score. I tried to create | and K/M for up and down.

a simple but interesting game - I hope you enjoy it.

Keys are Z/X for left and right

```
REM
             *************
* SALVAGE *
       REM
             **********
       GO
           SUB 3000
       REM
             ************
* INITIALISE *
       REM
             REM
       DIM
       LET
   30
      LET
FOR
LET
   50
             B=0
  F$(I, INT (RND +20+6)) ="
       LET
  100
110
115
       NEXT
LET
LET
            Y=17
Y=17
T=0
  120
       LET
             X = 1
 130
      LET
                             £££££
 £ £ 140 1150 1150 1170 1
£
      E E
LET
            A(1) = -1

I=2 TO 14 STEP

A(I) = -1

A(I+1) = B

A(I+2) = C
       FOR
      LET
  180
       NEXT
 200
210
287
            A(17) = -1
Z = 0
       REM
             *******
 288
       REM
               SCREEN
 289
       REM
             ********
 300
       PRINT "SCORE= ";5,"HI-SCORE
AB
425 IF YI=1 AND A$(XI+1) ="£" TH
EN GO SUB 1500
430 IF YI=1 THEN GO TO 460
435 LET L=(INT ((YI+1)/3)=(YI+1)/3)
 1000
440 IF L AND F$(INT ((YI+1)/3)
XI+1)()" THEN GO TO 600
445 IF A(YI)=-1 THEN GO TO 460
450 LET L=(YI/3=INT (YI/3))
```

#### How it works

5 GOSUB for instructions 10-60 set initial values of vari-

**70-100** for each array 1-5 of F\$ set it to 32 "stars", then replace one, at random, with a

110-130 more variables

140-200 set each element of A to -1 if F\$ row, or 0 or 31 for "door" position

210 zero flag

290 clear screen (Spectrum set BORDER/PAPER/INK colours?)

300-350 draw screen 400-410 see if key is being pressed and, if so, store next position in Y1 or X1

420 if you have returned with some goodies GOTO 1000

425 if you have reached the goods, GOSUB 1500 430 if you are on line one GOTO

460 435 L = 1 if an F\$ line, 0 if other

position
440 if not at a space on F\$ line,
GOTO 600

445 if all OK GOTO 460

450 L = flag for position 455 check to prevent movement

into a 'prods' tail

460 if no move has been made jump to 600 - this prevents flickering
470 wipe old character, print in

new position 480-490 update X and Y to new position
600 if on F\$ line GOTO start of

main loop. Also 1 in 5 chance of moving door (change .8 to give more or less frequent movements)

610-630 move appropriate 'door' one place to left or right 640 if character hit GOTO 2000

650 update new position to A(Y)
660 GOTO main loop
1000 if complete set of items
salvaged GOTO 1080

1010 move character, print mes-

1020-1040 update score, zero flag

1050-1070 GOSUB pause, wipe, then continue

1080-1140 give a bonus for clearing sheet, reset variables, GOTO draw new sheet

1200-1230 pause, wipe line 18, 1500-1510 check not trying to

pick up two items

1520-1550 set "carrying" flag,
empty A\$ of item return

2000-2020 animate explosion
(colour/sound etc. Spectrum)

2030 print message
2040-2060 was last score higher than Hi-score? If not GOTO 2070, else print message, update HS to S

2070-2080 wait for key press before next game 3000-3080 simple instructions

#### **ZX81 AND SPECTRUM PROGRAM**

```
455 IF (A(YI)>=XI AND L) (YI) (=XI AND NOT L) THEN GO
  460 IF X=XI AND Y=YI THEN GO TO
  600
        PRINT AT Y,X;" ";AT YI,XI;"
  470
  480
490
         LET X=XI
          597
  598
              M ************
A(Y) =-1 OR RND (.6 THEN G
  599
 600
610
620
          400
610 LET E=(Y/3=INT (Y/3))
620 LET D=A(Y)+E-(E=0)
630 PRINT AT Y,A(Y); "#";AT Y,D;
("<" AND NOT E)+(">" AND E)
  640 IF D=XI OR D=X THEN GO TO 20
 999 REM ************
1000 IF A$=F$(6) THEN GO TO 1080
1010 PRINT AT Y,X;" ";AT YI,XI;"
0";AT 18,0;"WELL DONE : SCORE ="
          LET 5=5+100
PRINT 5; AT 0,6; 5
1020
  030
         PRINT 5; AT 0,6; 5

LET Z=0

GO SUB 1200

GO TO 480

PRINT AT 18,0; "BONUS +1000"

LET 5=5+1100

PRINT AT 0,6; 5

GO SUB 1200

LET B=1

LET C=30

GO TO 110

FOR I=1 TO 50
1030
1050
1080
1090
1108
1110
1120
1130
 1200
```

_		
	1210 NEXT I	_
	1220 PRINT AT 18,0: F4(6)	
	THE RETURN	
	1497 REM **********	
	1498 REM * £ ROUTINE * 1499 REM ***********************************	
ı	TOUGH IE / THEN I GT VY V	
ı	1510 IF Z=1 THEN RETURN	
ı	1510 IF Z=1 THEN RETURN 1520 LET A\$(XI+1) =" "	
ı	1550 RETURN	
ı	1997 RFM ********	
ı	7330 NEW * CBUZHEV *	
ı	- ナニニュ 以口以 - チェチナナナナナナ	
ı	2000 FOR I=1 TO 20 1	
I	2010 PRINT AT Y,X;" *"; AT Y,X;"o"	
ı	2020 NEXT I	
ı	2020 NÊXT I 2030 PRINT AT 18,0; "SQUASHED PRESS A KEY TO DE 07"	
ı	PRESS A KEY TO PLAY"	
ı	2040 IF S (=HS THEN GO TO 2070	
ı	2050 PRINT "A NEW HI-SCORE :";5 2060 LET HS=5 2070 IF INKEY\$="" THEN GO TO 204	ı
L	2070 IF INKEYS="" THEN GO TO 304	H
	000000000000000000000000000000000000000	1
l	2080 GO TO 40	
ı	3000 CLS	1
ı	3010 PRINT TAB 12; "RESCUE." 3020 PRINT AT 3,0; "MOVE YOUR MAN	1
ı		
	BAGS OF GOLD."	
	3040 PRINT AT 8,0; "KEYS : Z TO M OVE LEFT", TAB 7; "X TO MOVE RIGHT ", TAB 7; "K TO MOVE UP" TAB 7: "M	
	TO MOVE RIGHT	ı
1	TO MODE DOUGH	н
	3050 PRINT AT 18 A: "RELIGIE OF TH	1
	3060 PRINT AT 21,4; "PRESS ANY KE	1
	TO PLAY" H 21,4; PRESS ANY KE 3070 IF INKEY\$="" THEN GO TO 307	1
1	S S S S S S S S S S S S S S S S S S S	
_	3080 RETURN	1.

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# IOME COMPUTER SHO

HORTICULTURAL SOCIETY'S NEW HALL, WESTMINSTER

#### **SOFTWARE REVIEWS**

### Memory Game Oric £3.95

Stour Computing, 16 Old Bridge Road, Bournemouth

A version of the familiar Pairs or Pelmanism game, usually played with a pack of cards.

Twelve symbols are secretly plotted over a grid on the screen and the players, up to four of whom can take part, take turns in selecting positions.

The symbols at the chosen pair of positions are briefly revealed and re-hidden if they do not

Since there are 48 positions the maximum number of pairs is 24,

and a point is awarded for successful choice.

The 48K version has an attractive jingle not available on the 16K and, slightly more important, it also has instructions. However, 16K owners who

Puzzler

Dragon 32

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UQ

This game is like a cross between

the sliding block puzzles we used

couldn't figure out how to play the game probably wouldn't get as far as loading the program in the first place.

Having said that, I had some difficulty in loading the 48K version, but once that had been mastered, I found the program was clearly presented and attractively laid out.

Nine of the 12 symbols are redefined characters — why were the other three left unattended to?

Simple, but fun, this game would appeal to the younger members of the family. P.S.W.

instructions - 7.	5%
playability 6.	5 %
graphics 6.	5%
value for money 70	0%



# **Sport with** thought

#### Our review panel tries out a selection of thinking and strategy games to play on your micro

to keep in our pockets and jigsaws with straight edged pieces

The aim is to reconstruct a picture from the jumbled pieces. There are three programs in the pack and four pictures in each program, so there is a good gradual difficulty gradient. Each puzzle can also be played in set numbers of moves and against the clock

If you decide to play against the clock, then a slow move means that a random exchange is made. This can undo some of your previous good work and makes the program that much more interesting

Beyond that there is very little to say. It works well enough and the pictures are acceptable but not thrilling.

If mental geometry is you thing, then it might be for you -

D.C. otherwise, buy a jigsaw.

instructions 60% 70% ease of use graphics 70% value for money 50%



#### **White Knight** Mk.II 32K BBC £11.50

BBC Software, 35 Marylebone High Street, London W1M 4AA

Is another chess program really necessary? The answer for White Knight is an unequivocal yes — I think it will soon become the program by which all others are

judged. No less than 16 different options are available to allow you to select speed and playing features. Tournament rules can be set up, as can clock time, orientation (black or white), and difficulty (i.e. how long the computer will 'think').

Speed of 'thought' can actually be set from between 1 second and several hours.

If all these options are not enough, White Knight also dis-

plays details of its thought processes, giving insight into strategy.

In my opinion, the program played an interesting and challenging game — so challenging that I decided to let it play against Sargon II running on my

Apple II.

Most impressively, White
Knight beat level 1 Sargon, playing white, after 60 moves. Perhaps I'll let it play itself with invisible pieces (more options!) P.D.

instructions	90%
ease of use	90%
playability	99%
value for money	80%



#### Gangsters! **48K Spectrum**

Cases Computer Simulations, 14 Langton Way, London SE3 7TL

I have seen quite a few version of Kingdoms in my time, but Gangsters has to be my favourite. The first time I played it only took me 11 months to take over the

underworld. Great.
The idea of the game is that you are the leader of a new gang in are the leader of a new gang in town and with the capital you are given at the start of the game you must take over, and eventually become master of the under-

You can buy such appealing things as speakeasies, brothels and distilleries. With these establishments you make your income. This can then be either used to

buy more speakeasies etc, or used as bribes and payments for

contracts. The game uses excellent sound and graphics throughout, especially for a game which is not normally associated with all the whizzes and bangs you would find

in an arcade game.

For example, it starts with the screen being shot with bullet holes, accompanied by some pretty effective, and obviously

machine code, sound.

The game itself is written in BASIC, but it runs perfectly well. I have only found one bug so far - if you enter the amount of gangsters you want to hire as zero, (which it accepts), then the game gets caught in endless loops. P.S.

instructions playability graphics value for money

85% 100% 90% 99%



#### It's Only Rock'n Roll **48K Spectrum** £6.95

K'Tel, 620 Western Avenue, London W3

Already a big name in selling records and gadgets, K-Tel is now jumping on to the software bandwagon

But this is a bad start - and anyone joining a sophisticated market needs to make a strong opening bid.

The challenge to become a star lost attraction after one or two plays. For a program based on pop music a machine with synthesiser ability is needed, say BBC or Commodore.

The Spectrum cannot do much to provide sound in the concert highlights graphics sequence, which is a waste of time and

memory

You must take decisions regarding song writing, manage-ment, concert tours, energy and cash expenditure.

You are swung between the options list, the consequences of your decision and odd news-flashes, which often appear to be of no consequence to your situation.

Can you make a million and collect three status symbols?

One of the least amusing

features is the attempted humour in the random composition of song lyrics lavatory style laughs.

If you are intent on making a million then don't invest your first £7 in this.

P.C.

instructions 50070 20% playability 100% graphics 10% value for money



#### SHOW REPORT

## All that's new at the Microfair

Once again, we bring you the first full report of the latest ZX Microfair. Paul Liptrot went there



Denis Thatcher dreams of some of the characters in the new adventure Denis Through the Drinking Glass



Chris Monckton, proprietor of Chipmunk, claims you'll clean up at the casino with his Blackjack program



A new computer trolley from Young and Jones keeps all your computing gear tidy



Anne Galloway, 23, with the latest game from Lydenhurst, De-Fusion



Leslie Hartridge, "whizz-dad" and author of Flippit, with daughters Mary-Ann and Carol-Lynn

IT WAS a more relaxed Microfair this time because organiser Mike Johnston had extended it to two days.

So, although more than 11,000 people attended there was room to move in the aisles — unlike last time when 8,000 attended the one-day event.

It was held at north London's Alexandra Pavilion, which will also be the venue for the next Microfair on February 4.

There was lots of new software and a selection of new addons... plus more retailers than at earlier shows.

This last fact prompted software house CRL to abandon its booked stand.

Managing director Clement Chambers said there was no point in staying when retailers were selling the same software as the manufacturers and, in some cases, undercutting prices.

But Mr Johnston, who is also secretary of the Guild of Software Houses, said he was not going to dictate who took stands, provided the shows offered the widest possible selection of add-ons and software.

In fact, he said, retailers could extend the range of software on show by displaying products from companies without stands.

'I would have liked him to have stayed since he booked and some people will have been disappointed. And if he can't undercut retailers....

A lovable but dim St Bernard called Brandy was the inspiration for the first arcade game from Carnell, the software company best known for its adventures.

The Adventures of St Bernard, priced at £5.95 for the Spectrum, is based on director Stuart Galloway's dog. He said: "Brandy gave me the idea. He's as thick as two short planks.

In the game, programmed by Stephen Kirk, you guide Brandy past wolves, pools with ravenous walruses and skating penguins to rescue his mistress from the lair of the evil snowman.

Carnell also launched The Crypt (£4.95, Spectrum) by co-director Roy Carnell, who wrote most of Carnell's other adventures. Two more which continue the theme are due next month.

Denis Through the Looking Glass, a Spectrum adventure at £5.50, bears the warning: "Not recommended for children under

It is based on our Prime Minister's husband and features figures like Ken Livingstone, Norman Tebbitt, Mary house, Tony Benn and the Pope with Dennis Skinner, voluble MP for Bolsover, as the guide.

Applications' Roger Taylor explained: "There are a couple of

bawdy bits when he gets to Soho. But you will never solve it if you've got a dirty mind.

PSL showed a new light pen from Trojan designer Geoff Jones. Priced at £17.25 for the Spectrum, it can draw in hi-res with a choice of eight colours and screens can be saved from and loaded to the screen.

The company also had a new Abbex game by 17-year-old Paul Reynolds. Krakatoa (£5.95, Spectrum) is part arcade, part strategy in which you have to stop a tanker being sunk. If you fail you must rescue survivors by heli-

Hisoft brought out Microdrive versions of Pascal (£25) and Devpac (£14), an assembler/disassembler. More comprehensive versions are promised next month and Hisoft says existing owners can upgrade at a small cost.

CDS has two new £5.95 games for the Spectrum: Magic Meanies, an arcade game which takes place underground, and Spectrum Safari, in which three men stranded on an island have to

barter for food and boat.

The YOJO computer desk trolley was on display by Young and Jones Designs. Priced at £44.95 — with £4.95 for optional storage bin — it is supplied packed flat in beige and black painted steel. It holds computer, tape unit, TV, disc drives with power supply and cables kept out

of sight.

David Husband's ZX81 FORTH ROM with multi-tasking replaces the ZX81's BASIC ROM and comes as a fit-it-yourself EPROM, with manual, at £25. It needs memory expansion and will work with 16K, 32K or 64K RAMpacks.

Mr Husband says his FORTH is quicker than FIG-FORTH in most applications, being a compiler directive language which does not use the traditional inner-

interpretive approach.

ZX81 FORTH matched FIG-FORTH standards, but not all FIG-FORTH words due to lack of memory. It contained some non-standard words for multitasking — up to 10 at a time which can be scheduled to execute from 50 times a second to once a year.

Ready converted ZX81s are available.

Mikro-Gen launched 13 new titles, bring its range up to 25. Among them is Mad Martha II, a sequel to its top-seller featuring a hen-pecked husband. Mikro-Gen's Paul Denial said Pat the Postman, which involves collecting parcels for a mail train, was good for children because "noone kills anything. Both cost £6.95.

A partnership of three teenagers, calling themselves Star-

#### SHOW REPORT

zone, showed their first product, an arcade game with the familiarsounding name of Zaxxan (Spectrum, £5.50). But writer Nial Mardon, 15, said: "It's not the same as Zaxxon." The partnership, Tim Mardon (Nial's brother), David Cowell and Tim Lake, plan more software for the Spectrum and the BBC micro.

Add-On Electronics showed two new £5 Spectrum games: Chuckman, a maze game featuring bombs and pits, and a space fighter game called 3D Star Wars.

Master Tool Kit (£9.95) from OCP, adds new features to the Spectrum, including auto- and re-number, trace, clock and alarm, delete/copy, string search and substitute, 10 user defined keys and a separate character generator.

Nineteen new games were brought out by dk'Tronics — 12 for the Spectrum, five for the Commodore 64 and two for the VIC-20.

Quicksilva has Ultisynth 64, which turns the Commodore 64 into a music synthesiser for £14.95 and a version of its popular Mined Out for the Electron (£6.95).

New concepts in Spectrum joysticks, both costing £9.95, were shown by two separate companies — on adjoining stands. Both joysticks clamp onto the keyboard and depress the cursor keys and are produced by **E.E.C.** and Grant Design.

Artic had Earth Defence, in which you save a city from nuclear devastation, and the selfexplanatory Snooker, both at £5.95 for the Spectrum.

The company also previewed a ladders game called Bear Bovver in which your Teddy bear has to avoid the bovver bears. Due out in a fortnight, it was written by 27-year-old Jon Ritman.

Gilsoft promised four new adventures next month, all written with its program called The Quill, which enables machine code adventures to be written without a knowledge of machine code.

A new joystick interface from Fox Electronics (£28.50) contains a CMOS RAM, powered by a trickle-charge battery, which can store the names of 16 games and the keyboard details for up to three months. It can also be used as a pseudo-ROM for regularlyused routines. The plug-in interface accepts Atari-type nine-pin joysticks.

Silversoft showed three new arcade games at £5.95 — Freez' Bees, Robot Riot and Sam Spade.

De-Fusion (£5.50, Spectrum) from Lydenhurst involves you in de-fusing a bomb, while avoiding skinheads' boots.

Dressed as Groucho Marx,



The Piman, Automata's character, is on a calendar, audio tape — and computer programs

director Mel Croucher lived up to Automata's image as software's jokesters.

He was offering a Christmas deal which wasn't software at all. The £5 package consits of a C20 blank tape, a calendar featuring Automata's Piman character plus an audio tape of The Piman's Greatest Hits.

Recorded by Mel Croucher, the tracks include Computer Alphabet ("by Lurch, the office parrot"), Country Musac ("by Lady Clair Sinclive and the Bad Tastes") and the extended disco version of Pimania ("as recommended by leading South American torturers). Sound effects include a Sherman tank and Concorde.

New software from Automata includes Morris Meets the Bikers (£6, Spectrum) based on the Piman character's car and with a song called Leader of the Pac on the same tape; and Yahtzee (£5) which has Dragon and Spectrum versions on the same cassette.

Fantasy and Vortex launched sequels to earlier successes.

Doomsday Castle (£6.50, Spectrum) is an arcade-adventure which follows Fantasy's Pyramid.

And Android 2 (Spectrum, £5.95) is the follow-up by Vortex of Android 1.

Educational specialists Widgit brought out a three-program tape designed to help children of five-10 with logic and reasoning. Priced at £6.25 for the Spectrum, The Humpty Dumpty Mystery and Who Killed Cock Robin? was written by primary school deputy head Gordon Askew.

Leslie Hartridge, author of Flippit (Spectrum, £9.95) and proprietor of Lez Peranto, brought along daughters Mary-Ann, 17, and 14-year-old Carol-Lynn to help out on the stand. Mary-Ann had helped father in the early stages by typing in his

Commenting on his age, Mr Hartridge, a 59-year-old teacher, said: "With all the whizz-kids around, why shouldn't there be some whizz-dads?'

Wargamers Red Shift showed a pre-production version of Nebula (£6.95, Spectrum) a strategy game of space conquest.

BJ (£5.95, Spectrum) will help you win at Blackjack when you play with real cards, claims author Chris Monckton, pro-prietor of **Chipmunk**. Mr

Monckton, who developed the program on an Osborne 1, said vou learn as you watch the computer play. To bring some style to his stand, he was dressed in a dinner jacket.

Richard Shepherd, adventure specialists, showed its latest, Urban Upstart (£6.50, Spectrum), set in a town called Scarthorpe — "a town so tough even the dogs carry flick-knives.'

Premier showed the first in a series of six tapes written by primary school teachers to encourage creative writing. Spacewreck (Spectrum, £4.50), generates an adventure after a space crash — selecting incidents at random. Premier offers a marking and assessment service of written work for £1.50 per program.

Where to find them

Exhibitors in order of appearance in article:

Carnell, North Weylands Industrial Estate, Molesey Rd, Hersham,

Surrey
PSL, 52 Limbury Rd, Luton, Beds
LU3 2PL
Hisoft, 13 Gooseacre, Cheddington,
Leighton Buzzard, Beds LU7 OSR
CDS, 10 Westfield Cl, Tickhill,
Doncaster, S Yorks DN11 9LA
Young & Jones, 10 Oak Rd, Clanfield, Portsmouth PO8 0LJ
David Husband, 2 Gorleston Rd.
Branksome, Poole BH12 INW
Mikro-Gen, 1 Devonshire Cotts,
London Rd. Bracknell, Berks

London Rd, Bracknell, Berks Starzone, 74 Wallingfor Rd, Shillingford, Oxford

Add-On Electronics, Units 2-4, Shire Hall Industrial Est, Saffron

Walden, Essex OCP, 4A High St, Chalfont St Peter, Bucks SL9 90B

dk Tronics, Unit 6, Shire Hill Industrial Est, Saffron Walden, Essex CB11 3AQ Quicksilva, 13 Palmerston Rd, Southampton SOI ILL E.E.C., 1 Whitehouse Cl, Chalfont St Peter, Burge S1 0 0D 4

St Peter, Bucks SL90DA Grant Design, Bank House, Reepham, Norwich, Norfolk NR10

Artic, Main St, Brandesburton, Driffield YO25 8RL Gilsoft, 30 Hawthorn Rd, Barry, S

Glamorgan, S Wales Fox Electronics, 141 Abbey Rd, Basingstoke, Hants Silversoft, 271/273 King St. London

Lydenhurst, 38 Ashley Rd, London N19

Automata, 27 Highfield Rd, Portsmouth PO4 9DA

Fantasy, Fauconberg Lodge, 27A Si Georges Rd, Cheltenham, Gloucs Vortex, 280 Brookside Rd, Brook-lands, Manchester M23 9HD Widgit, 48 Durham Rd, London N2

Lez Peranto, distributed by Sinclair Research, Camberley, Surrey GU15

Red Shift, 12C Manor Rd, Stoke Newington, London N16 5SA Chipmunk, 52A The Vale, London

Richard Shepherd, Elm House, 23/25 Elmshott La, Slough, Berks Premier, 1 Hollington Rd, Upper Tean, Stoke on Trent ST10 4LG



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The Car Shop 103 Lickhill Road Stourport

CB TV Hi-Fi & Video Sales & Service 59 Tamworth Street Lichfield

Channel 8 Software Ltd 51 Fishergate Preston Lancs

Computer Cabin 24 The Parade Silverdale Newcastle Staffs

Computer Plus 2 Church Lane Banbury Oxon

Philip Copley Hi-Fi Ltd 6 Wisley Street Clifford Court Ossett Wakefield N Yorks

D A Computers Ltd 104 London Road Leicester LE2 002

Dimension 27/29 High Street Leicester

Eddy's (Nottm) Ltd ENL Audio Visual 116/118 Afréton Rd Nottingham NG7 3NR

Estuary Software Products 261 Victoria Avenue Southend on Sea Essex

Fabulous Phones 72 High Street Orpington

Fal Soft Computers 8 St Georges Arcade Falmouth Cornwall TR11 3DH

Gemini Electronics 50 Newton Street Manchester Godfreys 30 East Walk Basildon

JCV Organisation Ltd Units 7/8 Wharf Street Warwick CV34 5FO

KP Camera & Computer Shop 12a Kings Parade Cambridge

Mega Ltd 7 Anley Street St Helier Jersey

Micro Business Centre Ltd 17-19 Lichfield Street Wolverhampton WV1 1EA

Micro North 7 Broad Street Bury

Selectronics 392 Farnham Road Slough Berks SL2 1JD

Sherwoods Photographic Ltd 11-13 Gt Western Arcade Birmingham B2 5HU

Software Centre 128 Wigmore Street London W1

Software City 3 Lichfield Passage Wolverhampton W Midlands

Statacom Ltd 234 High Street Sutton Surrey

Telford Electronics Inside Bambers Telford Town Centre Shropshire

Trend Hi-Fi & Video 167 High Street Walthamstow London E17 9PD

Vision Store 96/98 North End Croydon CRO 1UD

Whimz 36 Battersea Rise London SW11

D T Wicks 49 North Station Road Colchester Essex

William Smith (Booksellers) Ltd University Bookshop White Knights Reading RG6 2AH

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## Top Ten programs for the Spectrum

	Psion (4)
1 Chequered Flag	Ultimate (7)
2 Atic Atac	Fantasy (-)
2 The Pyramiu	Quicksilva (3)
4 Ant Attack	Ocean (2)
r Kong	i litimate (1)
6 Lunar Jetman	Bug Byte (5)
7 Manic Miner	Incentive (10
- 0-lot	Psion (8)
9 Flight Simulation	Psion (-)
10 Scrabble	
10 30.3	-: in brackets

Compiled by W.H.Smith. Figures in brackets are last week's positions

## Top Ten programs for the ZX81

10b 1011	\
	Quicksilva (6)
1 Defender	Quicksilva (1)
2 Scramble	Quicksilva (/)
3 Asteroids	Sinclair (5)
A Chess	Sinclair (9)
E Space Raiders	Sinclair (8)
6 Fantasy Games	Ouicksilva (-)
7 Invaders	Sinclair (-)
o Inca Curse	Sinclair (-)
o 7×81 Forth	Sinclair (-)
10 Maths/Geography	
10 1110	:- brackets are

.

Compiled by Websters. Figures in brackets are last week's positions

#### Top Ten programs for the Dragon

1	Mined Out	Quicksilva (3)
2	Pettigrews Diary	Shards (10)
3	Night Flight	Salamander ()
4	Ring of Darkness	Wintersoft (1)
5	Dragonfly II	Hewson (-)
6	Gridrunner	Salamander (-)
7	Champions	Peaksoft (5)
8	Lionheart	Peaksoft (—)
9	Frogger	Microdeal (6)
10	Morocco Grand Prix	Microdeal (-)

Compiled by Websters. Figures in brackets are last week's positions

## Top Ten programs for the VIC-20

1 Arcadia 2 Wizard & the Princess 3 Wacky Waiters 4 Laser Zone 5 Matrix 6 Gridrunner 7 Skyhawk 8 Sargon II 9 Money Manager	Imagine (4) Melbourne House (1) Imagine (2) Llamasoft (-) Llamasoft (10) Llamasoft (-) Quicksilva (5) Commodore (-) Commodore (-) Bug Byte (3)
9 Money Marris	Bug 57

Compiled by Websters. Figures in brackets are last week's positions

#### **BEST SELLERS**

## **Top 30**

1	Atic Atac	Ultimate	Spectrum ()
2	Lunar Jetman	Ultimate	Spectrum (7)
3	Kong	Ocean	Spectrum (5)
4	Jetpac	Ultimate	Spectrum (2)
5	Manic Miner	Bug Byte	Spectrum (3)
6	The Hobbit	M.House	Spectrum (4)
7	Valhalla	Legend	Spectrum (1)
9	Chuckie Egg	A&F	Spectrum (17)
10	747 Flight		
	Simulator	Doctorsoft	BBC
11	Pool	CDS	Spectrum (16)
12	Melbourne		
	Draw	M.House	Spectrum ()
13	Falcon Patrol	Virgin	CBM 64 (25)
14	Ostron	Softek	Spectrum (-)
15	Night Flight	Microdeal	Dragon (-)
16	Killer Gorilla	Program Power	BBC (10)
17	Trans-Am	Ultimate	Spectrum (8)
18	Splat	Incentive	Spectrum (-)
19	Cookie	Ultimate	Spectrum (9)
20	Horace and the		
	Spiders	Psion	Spectrum (13)
21	The King	Microdeal	Dragon (18)
22	Penetrator	M.House	Spectrum (22)
23	Hall of the Things	Crystal	Spectrum (14)
24	Cuthbert in the		5 (45)
0.5	Jungle	Microdeal	Dragon (15)
25	Snooker	Arctic	Spectrum (-)
	Franklins Tomb	Salamander	Dragon (—)
27	3D Dimension	A	Constant ( )
20	Destruction	Arctic	Spectrum (-)
28	Crazy Painter	Microdeal	Dragon (-)
29	Pssst 3D Combat Zone	Ultimate Arctic	Spectrum (20)
30	3D Compat Zone	Arctic	Spectrum (23)

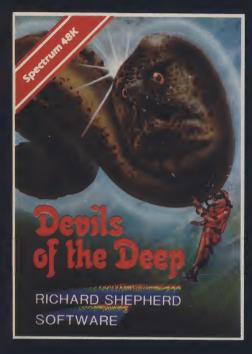
Compiled by PCS Distribution (0254 691211) and sanctioned by the Computer Trade Association. Chart is for retail sales in individual outlets in the UK and Northern Ireland for the fortnight ended December 4

## Top Ten programs for the Commodore 64

Job Len by	Interceptor (8)
1 Crazy Kong 2 Frogger 3 Laser Zone 4 Spriteman 5 Motormania 6 Purple Turtles 7 Quintic Warrior 8 Aquaplane 9 Renaissance	Interceptor (17) Llamasoft (-) Interceptor (10) Audiogenic (6) Quicksilva (2) Quicksilva (4) Quicksilva (9) Audiogenic (-) Mirrorsoft (-)
10 Caesar the Cat	Figures in brackets are I

Compiled by Websters. Figures in-brackets are last week's positions

### "ADVENTURES INTO IMAGINATION"



#### **Devils of the Deep**

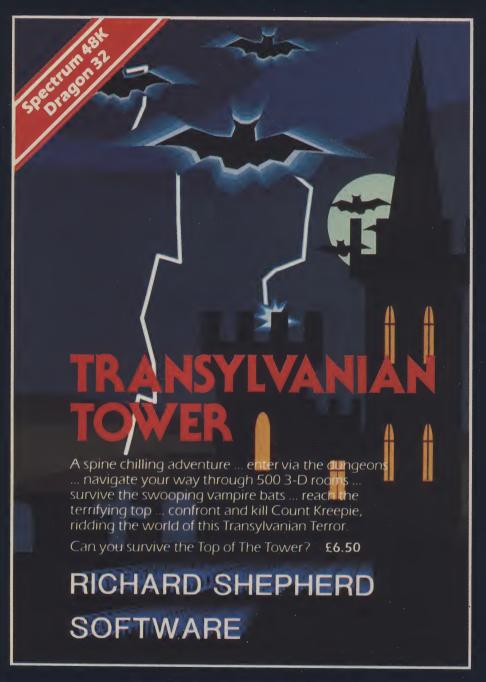
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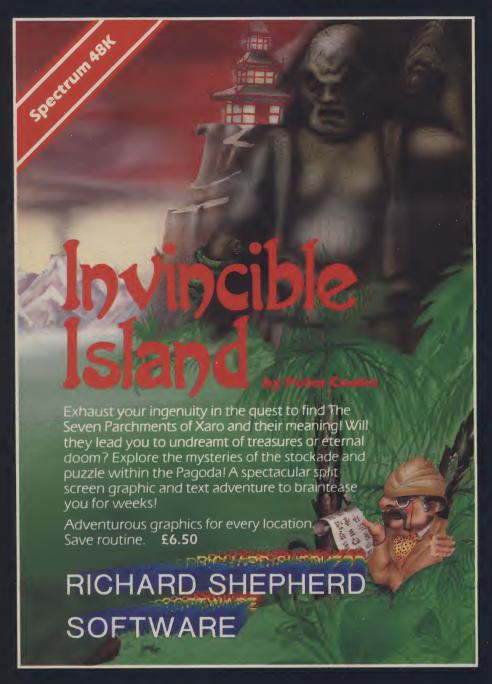
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ELM HOUSE, 23-25 ELMSHOTT LANE, CIPPENHAM, SLOUGH, BERKSHIRE.

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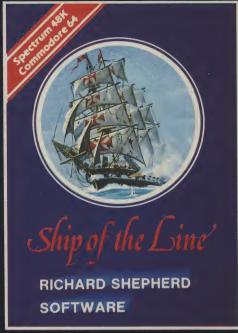
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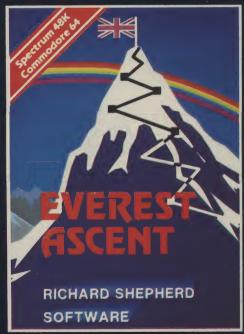


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#### TI-99/4A PROGRAM

## Don't let that alien

How long can you keep off the marauding alien hordes who are trying to take over your laser base? You'll need a iovstick to play Stephen Harris's Space Alien game for the unexpanded TI-99/4A

The alien has landed — a scene from Xtro



What's this? Your scanner is telling you there's an alien landing craft approaching your base — and your experience tells you that it isn't planning a social visit.

You'd better move quickly to make sure that craft doesn't get control of the base. Use your joystick to move the base from side to side, and try to shoot the alien down with your missiles. But don't be too trigger happy, or you'll run out of missiles, and the game'll be over.

You get 10 points for each hit and a new alien will start to make its way towards your base. How long can you fight them off?

#### Main variables

QW keeps score A randomises alien position recognises if missile button is

UI recognises if joystick is moved

#### How it works

100-240 print out instructions 250-390 define characters and colour

400-470 plot stars 480-660 move alien 670-730 move and fire 740-870 move left

810-870 move left 880-920 print laser 930-1060 out of missiles 1070-1160 print out score 1170-1290 end of game

#### Hints on conversion

CALL CLEAR clears the screen CALL HCHAR (A,P,G) A= row, P = column, G = positions ASCII character

CALL SCREEN (X) sets screen

colour

CALL SOUND (N,V,G) N = length of note, V = frequency,

G = volumeCALL KEY (N,V,G) N = console keyboard eg. call key (0,V,G). V = recognises if key is

pressed. G = recognises if same key is pressed

SPACE ALIEN 100 REM

BY STEPHEN HARRIS 110 REM

1983 120 REM

130 CALL CLEAR

140 CALL SCREEN(2)

150 FOR ZX=2 TO 16

160 CALL COLOR(ZX,16,1)

170 REM INSTRUCTIONS

180 NEXT ZX

190 PRINT "SPACE ALIEN":: "YOU CO NTROL THE BASE":: "AT THE BOTTOM

OF THE SCREEN":: "BY USING THE JO

YST STICK. 11 8 8

200 PRINT "SHOOT DOWN THE ALIEN

AND":: "PREVENT IT FROM LANDING B Y"::"PRESSING THE FIRE BUTTON"::

210 PRINT "BUT BEWARE... YOU ONL

Y HAVE"::"A LIMITED AMOUNT OF MI

220 PRINT "SCORING=10 POINTS PER

HIT":: "NOW PRESS ANY KEY "

230 CALL KEY(0,TYU,UYT)

240 IF (TYU=0)+(TYU=-1)THEN 230

250 CALL CLEAR

260 REM DEFINE CHARACTERS AND

SET UP SCREEN

270 CALL COLOR(14,12,1)

280 CALL CHAR(159,"1818181818181

818")

290 CALL COLOR(16,16,1)

300 D=16

310 Z=2

320 CALL CHAR(139,"1CEE7DFD5FDFF

7D")

330 CALL HCHAR(24,1,139,32)

#### TI-99/4A PROGRAM

```
340 CALL CHAR(42,"1818183C7EFFFF
5A")
350 CALL CHAR(127,"99C3A5FFE7423
042")
360 CALL COLOR(2,7,1)
370 CALL COLOR(12,8,1)
380 CALL HCHAR(23,D,42)
390 CALL CHAR(149,"0000001000000
000")
400 REM PLOT STARS
410 FOR TU=1 TO 30
420 CALL COLOR(16,16,1)
430 KJ=INT(RND%32)+1
440 PI=INT(RND*24)+1
450 IF (PI=24)+(PI=23)THEN 440
460 CALL HCHAR(PI,KJ,149)
470 NEXT TU
480 REM MOVE ALIEN
490 A=INT(RND*30)
500 IF A>10 THEN 530 ELSE 510
510 A=2
520 GOTO 570
530 IF A>20 THEN 560 ELSE 540
540 A=16
550 GOTO 570
560 A=30
570 CALL HCHAR(Z,A,127)
580 CALL HCHAR(Z,A,32)
590 CALL SOUND(30,-1,0,110,0)
600 Z=Z+1
610 IF Z=23 THEN 620 ELSE 680
620 CALL HCHAR(23,D,127)
630 CALL SOUND(1000,-5,0,990,0)
640 PRINT "THE ALIEN HAS LANDED
ON YOUR BASE"
650 GOTO 1171
660 GOTO 680
670 REM MOVE AND FIRE
680 CALL KEY(1,F,G)
690 CALL COLOR(15, INT(RND*13)+3,
1)
700 IF (F=0)+(F=-1)THEN 710 ELSE
890
710 CALL JOYST(1,UI,AS)
720 IF UI=-4.0 THEN 750 ELSE 730
730 IF UI=4.0 THEN 820 ELSE 490
740 REM LEFT
750 CALL HCHAR(23,D,32)
760 D=D-14
770 IF DK2 THEN 780 ELSE 790
780 D=2
790 CALL HCHAR(23,D,42)
800 GOTO 490
810 REM RIGHT
820 CALL HCHAR(23,D,32)
830 D=D+14
840 IF D>30 THEN 850 ELSE 860
```

```
850 D=30
 860 CALL HCHAR (23, D, 42)
 870 GOTO 490
 880 REM PRINT LAZER
 890 CALL VCHAR(2,D,159,21)
 900 CALL SOUND(30,1000,0)
 910 ER=ER+1
 920 IF ER>4 THEN 940 ELSE 1030
 930 REM OUT OF MISSILES
940 PRINT "YOU RAN OUT OF MISSIL
ES"
950 FOR A=-8 TO -5
960 B=B+110
970 C=10
980 CALL SOUND(500,A,0,B,C)
990 C=C-2
1000 NEXT A
1010 GOTO 1020
1020 GOTO 1171
1030 CALL VCHAR(2,D,32,21)
1040 IF D=A THEN 1080 ELSE 1050
1050 CALL SOUND(30,-7,0)
1060 GOTO 490
1070 REM PRINT OUT SCORE
1080 QW=QW+10
1090 CALL SOUND(100,-7,0)
1100 ER=0
1110 Q$="SCORE="&STR$(QW)
1120 FOR T=1 TO LEN(Q$)
1130 CALL HCHAR (1, T+1, ASC (SEG% (Q
$, T, 1)))
1140 NEXT T
1150 Z=2
1151 CALL COLOR(12,INT(RND*14)+3
 , 1)
 1160 GOTO 490
 1170 REM END OF GAME
 1171 IF QW>AW THEN 1172 ELSE 118
 1172 AW=QW
 1180 PRINT :: " YOUR SCORE IS ";Q
 W::
 1181 PRINT "HIGH SCORE="; AW
 1190 PRINT "PRESS REDO OR BACK"
1200 CALL KEY(0,□I,ED)
1210 QW=0
1220 Z=2
 1230 ER=0
1231 B=0
1240 IF (DI=15)+(DI=57)THEN 100
1250 IF (DI=6)+(D1=56)THEN 1270
1260 GOTO 1200
 1270 CALL CLEAR
1280 PRINT "* *PRESS ANY KEY TO
BEGIN* *"
1290 GOTO 230
```



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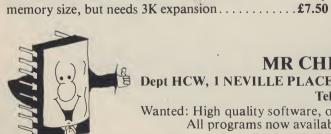
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per game, take on the computer or friends at these games of skill and judgement	of "JACKPOT" the ultimate Fruit Machine program for
skii and judgement	the VIC
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gram makes Commodore's Fruit Machine cartridge look	hire secret agents, (some of whom can be treacherous),
unbelievably cheap and nasty." Home Computing Weekly	negotiate for weapons, find and attack the secret rocket base to launch the missile, and watch the havoc and
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Accuracy and speed are required for this Shooting Gallery,	WHEELER DEALER
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#### **SOFTWARE REVIEWS**

## Plug in and o places

You can find yourself in some very funny places when you set out on a computer adventure. Before you go, read all about them in our reviewers' reports

#### 2003 - A Space Oddity **48K Spectrum** £4.95

dk'Tronics, Unit 6, Shire Hill Industrial Estate, Saffron Waldon, Essex

Mark well the name of this program because it certainly is an

Set in outer space, you have to find your way back to earth via a series of adventures which seem to have no point.

There are three possible exits to any scene, choosing from either north, south, east, west, up or down. These exits can be either a door, space ship, space warp, ladder, or space shield.

At some of the exits there are challenges to be met with a choice of fighting with either a laser or your mind. Of course, if you want

#### **Black Tower** TI-99/4A £5.95

Lantern Software, 4 Haffenden Road, Tenterden TN30 6QD

Black Tower is a text-based adventure game of the rescue-thedamsel variety

There are 10 locations to visit, so far as I know, and of course you must be in possession of the right articles or pieces of information in order to proceed to the next one.

Defeat can come in many different ways and I must have found them all. When this happens it's back to the old castle gate and start again.

Commands are entered in the usual verb-noun form, though short sentences are also accepted.

If your input is too wordy, however, it may cause the program to fail as I discovered right at the start.

I thought "Look for a door" was a good idea, but it was too much for the computer, so the game stopped right there. Oddly enough, "Look for door" was accepted.

I managed to solve this game after three to four hours spread over a couple of days. Since this is my first attempt at an adventure game I take this to mean that Black Tower is quite easy to beat. The alternative is that I am very talented.

I found this game quite enjoyable, though once solved, that's it. Instructions are adequate, but a list of keywords would be nice. C.E.

instructions 50% playability 75% graphics n/a 60% value for money

oddity.

to be chicken, then you can run.

Treasure is lying about in various locations, and you either have to fight to get it, or it's there for the taking. All the exits are drawn for you, and there is one option I'm sure that you will take.

Drawing the time or space warp, takes up quite a bit of time, and pressing G will ensure that they are drawn no more.

I have a feeling that the title was

written tongue in cheek, and the game too. It makes for light relief in the serious world of space blasters and hyper-drives.

instructions	100%
playability	75%
graphics	60%
value for money	100%

#### The Island 48K Spectrum £5.95

Virgin Games, 61-63 Portobello Road, London W11 3DD

An adventure game with two dif-ferences from Virgin! Not for them a complex manual; part of the fun is find out what the computer understands. And, yes, this is a graphic adventure, but very different from the Hobbit.

The adventure is set on some islands. Given the treasure map. you must navigate to the correct island, find the treasure and return with it.

When you start your adventure, this appears to be an all-text program. If, however, you manage to penetrate the fog bank en-route to the treasure island, you suddenly find yourself in the midst of a "dodge the rocks" action sequence much like an arcade game.

Fail, and you are sunk — sink, and you fail. Successful navigators reach the Island, but beware the swamp! More action sequences follow.

There is, however, a criticism. In the original text adventures, like Adventure 1 from Abersoft, taking the "wrong" route sometimes paid off, and when it didn't you certainly weren't killed off, but simply found yourself in an unproductive region or a very tight spot!

On the Island, take the "wrong" path and you will find yourself dead very quickly. **D.M.** 

instructions	n/a
playability	80%
graphics	80%
value for money	95%

#### Kraal's Kingdom VIC-20 plus 16K

Buntasoft, 149 Monks Walk, Buttingford, Herts SG9 9DS

Writing a good adventure is, in many ways, much more difficult than you would think. The problems are exacerbated by lack of

memory.

This author attempted to overcome this lack by writing the game in two parts. This nearly works, but is foiled by some appalling

mistakes in technique.

The scenario is standard enough. You charge around the place endeavouring to acquire the necessary impedimentia to rescue the princess.

The descriptions of the locations are good and the screen handling adequate. The main

black spot is the interpretation.

The author uses the method of expecting certain fixed commands only. This means that rather than a fixed two word command several words may be command, several words may be expected. This saves memory but makes play a nightmare.

As a result, I got stuck on a plank in the middle of a lake.
Only by cheating could I find which specified phrase was expec-

I found the game a little dry and lacking humour. In spite of these moans, at the price it is very good value and is guaranteed to drive you to the extremes of despair (as any adventure should). I wouldn't, however, recommendit for a beginner.

U U C	60%
structions	60%
ayability	n/s
anhics	90%
alue for money	,0

### va

#### Tomb of Dracula **48K Spectrum** £6.95

K'Tel, 620 Western Avenue, London W3

This game is another variation of the multi level adventure/maze type. Alas it is hardly inspired. You must enter Dracula's

chamber system and delve into as many levels as possible prior to sunset and Dracula's awakening. After this your progress becomes a little harder.

Other horrors to be avoided are ghouls, zombies, and slime pits. When you light on a surprise vault you may be lucky enough to add to your valuable (and useful) collection of silver stakes.

These can be used to kill op-ponents or pay for a glimpse of the map of the level in which you

are currently located. I must admit I did not venture very deep but I hardly found it compelling.

The game is not very dynamic. The graphics are average, but certainly not startling.

3D views of vaults are given but

add little to what you can imagine - helpful only if you have a poor sense of direction.

Use of colour is fair and there is the usual round of morbid minor key tunes.
All in all there is nothing new

here in concept or execution, so I think it must join a legion of similar programs that are some-thing less than top flight. Certainly at £7 it is overpriced. P.C.

pla gr

instructions 80% 700% playability 500% graphics 40% value for money



## SOFTWARE



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#### **ONE MAN'S VIEW**

## How you can spot the cowbovs

With home computers being as popular as they are today, more and more software companies are setting up and marketing their programs.

In the run up to Christmas many of these will be sold to both newcomers and experts in this field.

About half of the buyers of these programs will not be totally satisfied with what they get.

The fact of the matter is that there are still a lot of cowboys lurking behind glossy cassette inlay covers and flashy advertisements.

So how do you tell the difference between a high quality software company and one that is only after your hard

The best way is to see the software working before you buy it. Unfortunately this is not always possible so you may have to judge it by other means.

The second best way is to buy from companies who print screen displays on their adverts and/or cassette inlay

Companies who do this obviously want you to see the high quality of their programs — they don't need an artist to paint you a picture of what the game could, but will not, be

The third way of assessing programs is to read software reviews, such as the ones in this magazine. They will tell you the theme, quality, value for money and faults of the program. They are of course dependent on the reviewer's taste in programs, but even so will be given a fair review.

When looking around at programs you should expect

top quality software.

Games should be of arcade quality. Expect them to be written in machine code, make full use of graphics and sound and exploit your computers abilities. Text/logic games should be well presented and easy to use.

Educational software should be easily understood and useful, not a computerised gimmick. It should be able to

help you learn about a specific subject easily.

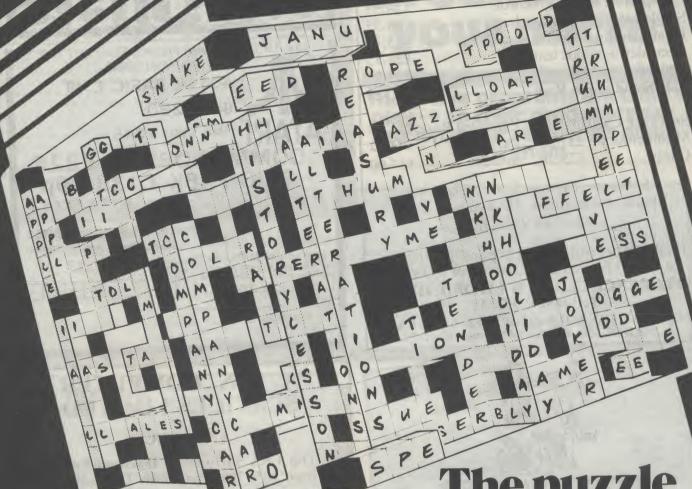
Utility and business software should make full use of your computer system. Ease of use and a neat output is essential in this type of application.

If there is a similar but better program available at a higher price then I would advise you to consider the better one — there is nothing worse than having to go about things the long way when there is an easy short cut available.

Software standards will only be as high as you set them. If you insist on the best, then the rubbish will dwindle away and more high quality software will be available at prices we can all afford.

**Kevin Irving** Software Reviewer Carlisle. Cumbria

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#### SOFTWARE REVIEWS

#### **First Steps** with the Mr. Men 32K BBC £8.95

Mirrorsoft, Holborn Circus, London ECIP 1DQ

Using computers with young children is not as easy as people assume - it very much depends on the quality of software that is available.

This package is one that works it's a well-thought-out and executed set of programs which will thrill many children in the four to eight age group.

The cassette contains four rograms which are graded in

difficulty.

The first, Mr Greedy's Ice Cream Hunt, is simply an attempt to improve hand/eye co-ordinaion and uses colour to emphasise direction.

Mr Silly's Hat Game is the weakest program on the cassette, because it takes far too long to finish. The aim here is to select the hats that Mr Silly wants, learning shape and colour matching in the

The final two games feature Mr Forgetful, who has lost either his clothes or letters of the alphabet in his 14 wardrobes. This is basically pair matching, but is very well done except for the tune at the

The package also contains a 24-page full colour book of Roger Hargreaves stories to explain, and interest the children in the games, plus a direction key template.

instructions	100%
ease of use	90%
display	90%
value for money	95%

#### **Pathfinder Spectrum**

Widgit Software, 48 Durham Road, London N2 9DT

Before numbers, or anything else, make sense, children need to be able to explore and practice with

basic concepts. Here, Widgit offers a real learning opportunity for preschool and primary age children.
In a series of four well pre-

sented maze games featuring animals, the child can practice counting, explore such concepts as up, down, left and right, and begin to develop the ability to plan moves in advance.

## Kidding around with your micro

These five programs are child's play — so their producers say. See what our reviewers made of them

You may be tempted to ask why these are important. Try driving, playing chess, programming in BASIC, using a map, or finding your way home without them!

Though the programs are largely in BASIC, they are well written, colourful, attractive and make good use of sound.

Much more important in an educational sense, they are well structured and purposeful, providing useful experience in a way that would be difficult without a computer.

Well done, Widgit! A real application for a home computer, cleverly executed and which D.M. doesn't cost the earth.

instructions	75%
ease of use	90%
display	85%
value for money	100%

#### **Fun To Learn 32K BBC £6.95**

Shards Software, 189 Eton Road, Ilford, Essex IG1 2UQ

This set of programs is written by a teacher and aimed at the six to 12 year old age group.

Count is a simple counting exercise which should only appeal to the very young. I wasn't impressed.

Mixer is a little better. displays a mixed-up word which the child decodes. Words can be selected by the computer, or the children can enter their own words for a friend.

Calculator is a simple simulation of a pocket calculator. Quite effective, but I am a little unsure of its educational value.

Starship is probably the best part of the program. Similar to Hangman, the object is to find the

word before your starship is destroyed. This should appeal more to children because of its competitive element.

Codebreaker allows the child to code or decode a word. Again I have doubts about its educational value.

The programs are well written. The display uses large double size teletext characters which is very good for a group of children to

observe together.

Colour is used to good effect and occasional musical pieces liven up the program. It is a good example of how educational software should be written, but some of the games lack imagination.

				G.T.
ease	uction of use			75% 90% 100%
disp valu	e for n	oney		65%

#### **Quick Thinking 48K Spectrum**

Mirrorsoft, Holborn Circus, London ECIP 1DQ

Although they deal with addition, subtraction and multiplication of numbers, these programs will not teach such complex processes. They merely provide the opportunity to practice what has already been learned in an enjoy-

The presentation of the cassette able way. is excellent, both visually and

The programs — written for Mirrorsoft by Widgit — are equally good, with superb use of colour and shape, though the Spectrum's screen shimmer rocks reading numbers difficult. makes reading numbers difficult. SumVaders has a mother ship dropping robots; add the num-

bers on each to destroy the robot before it reaches earth. When five land, the game is over.

In Robot Tables, the child must decide whether a piece of raw material is to be accepted or rejected before reaching the robot

making machine.

To be acceptable, they must have the next number in the chosen table sequence, for example 2, 4, 6 ....? Make the wrong choice and all sorts of feesingston, things happen. Great fascinating things happen. Great graphics!

Criticisms? Robot Tables practices tables in sequence, but we use them out of sequence in everyday life. It needs a random element.

		90%
structions		95%
ase of use		100%
i malasi		90%
value for money		



#### School Maze Dragon £10.95

Dragon Data, Kenfig Industrial Estate, Margam, Port Talbot

Some software houses show an annoying tendency to produce programs for children of a far lower standard than those aimed at adults, but with a similar (or in this case, higher) price-tag.

This is a prime example of the phenomenon — a fairly short and unsophisticated BASIC program which I feel should have been developed much further before being unleashed onto the public.

It is an adventure-type game with a few short distractions thrown in.

A map of the school is shown at intervals, but movements within the program are not always as the map would lead you to expect.

At some points you use the cursor keys to move an arrow on the map - it is an upward pointing arrow regardless of the direction in which you are going, and the keys used do not auto-

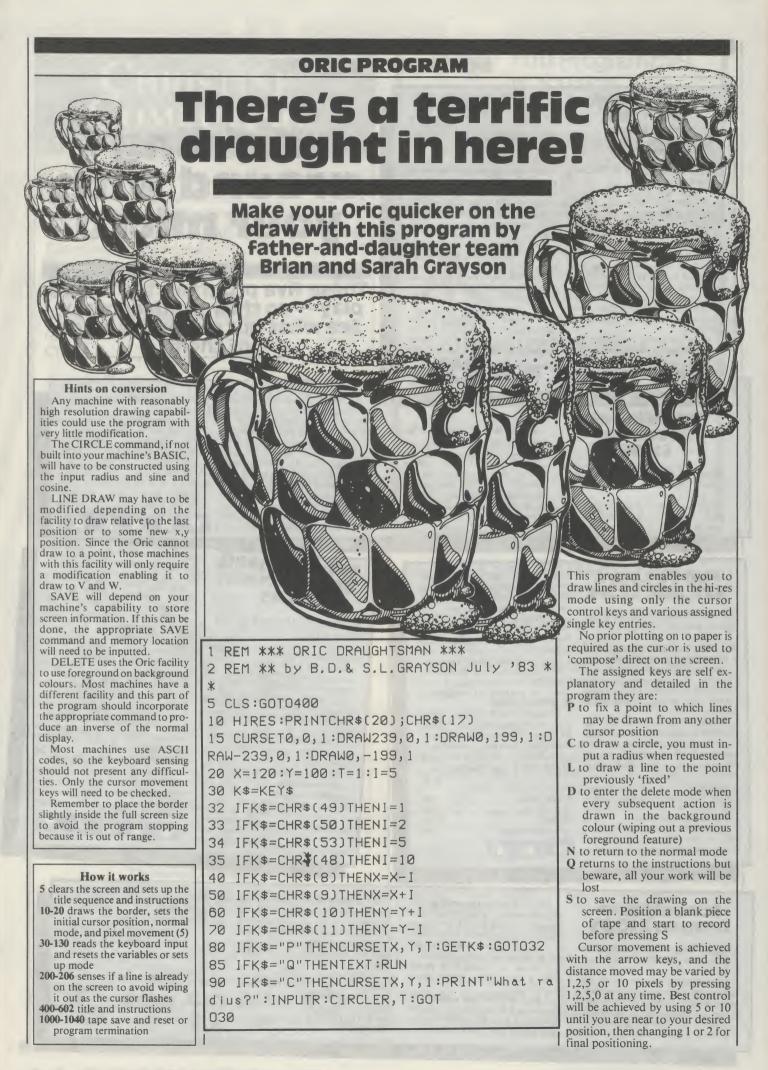
In the school gym you are invited to play basketball; the previous position of the ball is not blanked out as it moves, so you get a trail of black squares across the screen.

The options offered in the Music and Art rooms are similarly crudely done.

To be fair, though, I must add that my children and their friends liked it. liked it.

instructions		50%
		60%
ease of use		10070
display		10%
		100%
value for money		10 /0





#### ORIC PROGRAM

```
95 IFK$="S"THENGOTO1000
100 IFK$="F"THENCURSETX,Y,1:CIRCLE4,1:CL
S:PRINT"Line draw": V=X:W=Y
110 IFK$="L"THENCURSETU, W, 0:CIRCLE4, 0:CU
RSETX, Y, 1:DRAW(U-X), (W-Y), T
120 IFK$="D"THENPRINT"Delete mode":T=0:G
OT030
130 IFK$="N"THENCLS:T=1:GOTO30
200 IFPOINT(X,Y)=-1THENCURSETX,Y,0:WAIT5
:CURSETX, Y, 1:GOTO30
201 IFPOINT(X,Y)=0THENCURSETX,Y,1:WAIT5:
CURSETX, Y, 0:GOTO30
400 POKE618, 2: PAPER0: INK7
401 IFPEEK(524)>127THENPRINTCHR$(20)
402 PLOT16, 8, 20: PLOT17, 8, "ORIC": PLOT22, 8
, 16
404 PLOT12, 12, 20: PLOT13, 12, "DRAUGHTSMAN
":PLOT25, 12, 16
450 WAIT175:CLS
455 PRINT:PRINT:PRINT:PRINT
460 PRINT"This Oric program allows you t
o draw"
462 PRINT"lines and shapes in the comput
er's "
           "HIRES mode.
"Only a few single key co
464 PRINT
466 PRINT
mmands "
468 PRINT
              "are necessary, ":PRINT
469 PRINT "The finished drawing may
be"
           "saved onto tape and subse
470 PRINT
qently"
471 PRINT
              "reloaded and displayed, t
hough"
472 PRINT "not modified."
475 WAIT1500:CLS
500 PRINT" These are:-":PRINT
506 PRINT"The normal cursor control keys
":PRINT
507 PRINT"P - To fix a point":PRINT
508 PRINT"C - To draw a circle - you mus
t input a radius":PRINT
509 PRINT"F - To fix a point to which yo
u may"
```

510 PRINT"

line from the current"

r points":PRINT

draw l'ines from othe

511 PRINT"L - To draw a

```
512 PRINT"
              position to the 'F' point"
 :PRINT
 513 PRINT"D - To enter the delete mode."
 514 PRINT"
              Lines and circles when dra
 wn in "
 515 PRINT"
              the normal way will be era
 sed":PRINT
 516 PRINT"N - To return to normal mode":
 PRINT
 517 PRINT"Q - To quit the program and re
 turn"
 518 PRINT" to this list. ALL IS LOST!
 ":PRINT
524 PRINTCHR$(27) "L Press SPACE to
continue"
525 GETZ$: IFZ$=CHR$(32)THENCLS
528 PRINT: PRINT: PRINT: PRINT:
530 PRINT"S - This automatically saves t
he "
531 PRINT
                            finished dr
awing on tape"
532 PRINT"
             REMEMBER TO POSITION SOME
BLANK"
533 PRINT"
             TAPE AND START THE CASSETT
           BEFORE PRESSING
 15711
534 PRINT"
            To recover the drawing typ
e 11
535 PRINT"
            HIRES before 'CLOAD'"
536 PRINT:PRINT:PRINT
550 PRINT" The distance the flashing cu
rsor"
552 PRINT" moves may be varied at any t
554 PRINT"
           by inputting 1,2,5,0 for1,2,
5, 10"
556 PRINT" pixels. It is normally 5."
590 PRINT:PRINT:PRINT:PRINT:PRINT
8600 PRINTCHR$(27)"L
                        Press SPACE t
o begin"
602 GETZ$: IFZ$=CHR$(32)THENGOTO10
1000 PRINT"saving in progress"
1010 CSAVE"", A40960, E49000, AUTO
1020 CLS:PRINT"Saving complete. Do you w
ish to continue Y/N ?"
1030 INPUTR$: IFR$="Y"THENGOTO10
1040 IFR$="N"THENTEXT:CLS
```

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#### LETTERS

#### The joy of ioysticks

I have been a TI owner since the end of April this year, and am very grateful to the few magazines, such as yours, which take a real interest in the Texas micro.

However, very few of the programs in magazines such as yours seem to use the Texas joysticks. Though these joysticks are not the ultimate in good design, they can add another dimension or variation to games that would otherwise become boring.

Now before anyone tells me to get off my peripherals, plug in my modules and write a program myself, I'd like to say that I am doing just that — it will be a maze game, using joysticks, and when it has been fully debugged you might just get to see it.

Meanwhile, here is a joystick routine for the Apple Scrumping game printed in HCW 37. Replace lines 395 to 440 with the following:

395 CALL JOYST(1,A,B) 400 CALL HCHAR(Y,X,

405 IF (A<>-4)+(B<>0) THEN 415 410 X=X-1 415 IF (A<>4)+(B<>0)

**THEN 425** 

420 X = X + 1 425 IF (A <> 0) + (B <> 4) THEN 435

430 Y = Y - 1 435 IF (A < > 0) + (B < > 4) THEN 445 440 Y = Y + 1

This routine can, with slight modification, be used on many other games.

By the way, I typed this letter myself, in less than 10 minutes, but prior to obtaining my Texas this could have taken anything from two to three months without the practice on a real keyboard.

I doubt this improvement would have been the same using a Spectrum or Oric! I reserve the right to remain a bad speller, though.
Tony "Tonks"

Huby, Bramley, Leeds

#### Peace on earth — and elsewhere

I appeal to everyone who will be buying, giving or receiving computer games this Christmas to stop and think before making their choices.

I put it to you that encouraging young people to play games the purpose of which is to kill, bomb, shoot, conquer, destroy and show as much aggression as possible is as sick as forcing them to watch "video nasties".

In fact it is sicker, because

Send your letter to Letters Home Computing Weekly, 145 Charing Cross Road, London WC2H OEE. Don't forget to name vour computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address



with computer games they must actively participate.

It is a tragedy that while British home micro software leads the world in technical quality, the vast majority of the themes of "games" pear to have been thought up by the minds of massmurderers to give pleasure to admirers of Adolf Hitler, Jack the Ripper, Attila the Hun and Denis Nilsen.

Look through the adverts in this magazine and feel shame. We have allowed this to happen, and we are all responsible, programmers, advertisers, magazines and

shops.
We are using the greatest innovation of our age to teach kids that killing is OK. Pick your presents with care. Happy Christmas. Peace and goodwill to all Mankind, and Aliens.

Mel Croucher, Automata, Portsmouth, Hants

#### Computer talk from Norfolk

seem to have achieved fame - or is it notoriety? since having a letter published in HCW 31. Not that I'm complaining, as several people took the trouble to get in touch with me - in this neck of the woods, computerising females are a bit thin on the ground, and we need to stick together.

Is there a postal club for adventure game players? If not, would anyone be interested in starting one? I work full time, and don't honestly have the time to run a club, but I would be willing to help.

On the subject of adventure games, has anyone found all seven pieces of parchment in Invincible Island (Spectrum 48K)? I've found six, and can't find number seven. Help!!!! If your child is anything

like my daughter, she'll spend hours and hours drawing and colouring patterns. The following two lines help keep them quiet over Christmas!

10 PRINT (Your choice of

graphics, UDGs, spaces); 20 GOTO 10

This gives a screenful of pattern, and can easily be altered by adding or removing shapes or spaces. Enterprising parents can, by adding a few more lines, allow the child to choose paper and ink colours.

On to the complaints section. I've had dealings by post with four companies. Three out of the four have been excellent — Hewson, Gilsoft and Virgin Games. Who gets the booby prize? Quicksilva, that's who. I sent off a cheque to them for their Game Lords Club. It was cashed promptly, but it was over a month before I heard anything from them. Pity. Especially as some of

their games are so good.

A. Bates (HCW 38) (No relation as far as I know) is lucky to have got her husband interested in computing. So far, apart from playing the odd game, the most interest mine has shown has been when I put in a simulation of a twostroke engine.

He liked that, and thought that it might be of some use! Oh well, I shall just have to write a program of motorbike racing!
Best wishes, Happy

Christmas, and keep up the

good work.
Patricia Bates, North
Walsham, Norfolk

Mark Eyles of Quicksilva said: "The Game Lords Club is handled by a professional mail order company, and they're normally very quick — perhaps Mrs Bates's order got held up by the Christmas post. If she has any further problems, she should contact us at Quicksilva directly, and we'll do our best to help. By now, she should have received the first issue of the Games Lord magazine, anyway, which should be some consolation — we think it's really good!"

#### Cheat the ietman

Amaze your friends with your high score on Jet Pac, thanks to a slight scoring fault in the program.

On the fourth sheet of Jet Pac there are plane-shaped objects which, when they explode, give you points. If the jetman is placed on the top right hand cloud he cannot be killed.

So if the television is switched off and the computer left on, the program will continue to accumulate a steady score, and if left long enough, any score can be reached without laying a finger on the keyboard!

M. Brunning, Bispham, Blackpool

"... And whosoever recovers the sceptre will be made heir apparent to the throne of Cadarian. Signed, his most royal majesty Cydran IV, midsummer's day."

The herald remounted and spurred his horse on, to repeat the message in the next village.

Radro. They all knew that name, he reflected, yet few remembered the Underground Fortress of Evil at the height of its power.

The Castellan had often spoken of it, on the dawn watch. 'Many were the fallen. Some say 10,000 warriors breaching the upper defences, and 10 times that number in a futile attempt to secure the labyrinth beneath.

"But ours was the victory, if not the war. Radro was tamed if not broken, and the entrance sealed with mighty magicks. In our vanity we thought it ended."

The old man would shake his head. "Then fell forces attacked the palace, and removed the sceptre of rule, without which our king is powerless. And then to find the entrance to Radro unsealed... evil times to be sure. That is why you, young man, declare the challenge to the people."

Again the silver-grey hair would shake back and forth. "But few of true noble blood yet live, and none will dare the entrance. The memory of terror lies too strong upon the land."

The herald urged his mount on, shivering despite the clear sky and golden sun overhead.

#### How to play

This game is so big that I had to split it into two programs. Together they occupy over 200 disc sectors.

In order for the game to work, the first program should be called CASTLE.BAS' and the second 'MAZE.BAS'

The present version is for disc only, but conversion to cassette is a simple matter. First, all references to 'NAME.DAT' should be removed, as should all XIO statements.

Change all occurrences of "D:" to "C:". Lastly, insert a piece of code at the front of MAZE.BAS to ask for the player's character name.

In order to sustain interest, the game has been made strategically complex, although it is hoped that play itself is a simple matter.

When entering the castle for the first time, ask for a new character (note: most one-letter user replies do not require you to press return.) Keep a close eye on your gold supply as you wander around the market stalls.

If you wish to skip an option at any time or wish to avoid paying for something, type a zero. When you are sufficiently prepared, use

## The scept of Cadaria

Deep underground, evil things await those foolhardy enough to venture into Radro. Marc Freebury's adventure game was written for an Atari 800 with discs, but you can easily convert it to cassette



Ready for combat — a scene from Hawk the Slayer

100 REM \*\* \* 110 REM \* RADRO! FANTASY/ADV 120 REM \* RADRO! FANTASY/ADV 130 REM \* BY M.FREEBURY 240,120 240,120 230 DATA -1,-1 235 REM \*\*\* DRAW FRONT PAGE \*\*\* 240 RESTORE 200 250 READ X,Y:IF X=-1 THEN 280 260 IF X>320 THEN X=X-320:RLOT X,Y:GOTO 270 270 280 POR I=40 TO 270 STEP 5:PLOT 140,0:D RAWTO I,80:NEXT I 290 ? CHR#(125):POKE 752,1:? :? "\* RADR

option 5 from the courtyard to enter the maze.

Once at the maze entrance, you can retrieve a previously saved level by telling the doorwarden, and giving the name the level was saved under (usual eight-letter limit applies).

Once you descend the stairs, you will be given a three-dimensional view of the road ahead. At this stage it is a good idea to start drawing a map so that you can find your way back to the original stairs.

Movement is via the keys W,A and D - use A and D for turning on the spot and W to advance one

The maze plotter is written to be very fast, and as such has one slight defect. If two consecutive 'blocks' of the 20 by 20 grid are open to your left or right, a ghost wall will be created. These are easily spotted and should prove only a minor irritant at first.

Eventually you will encounter something. Treasure is randomly distributed and is not carried by monsters, since they have no use

for objects.

Speaking of monsters, combat is also likely. Up to six monsters may attack simultaneously and can easily hack you to pieces if you are foolhardy (or brave as some would have it) enough to stand your ground.

There are five combat options. First, hack at one monster with your sword. Second, run away.

Third is an option to cast one of the four spells available. These can only be cast if you have enough spell ability (gained from magical objects).

The first spell is 'sleep'. It will cause one monster to become drowsy, allowing you one free

Next is Fireball, causing one monster to lose nearly all its hit points.

Third is Rock To Mud. This lashes out magical power and disintegrates one block of the maze around you. Naturally this display of power will cause the monsters to be temporarily cowed.

Lastly is Teleport, which moves you at random.

Death. It reaches us all eventually. If your hit points reach zero, you die. Coming out of the maze restores all lost hit points.

Experience points are gained for monsters killed, and when enough have accrued, your character's level will increase, as will the upper limit of his hit points. Your rating as an adventurer will be indirectly tied to your level.

That is a basic outline of the game. Of course, there are things left unexplained but you'll find them out . . . (har har)!

```
THE UNDERGROUND FORTRESS *"
300 POKE 709,15
310 DIM DELAY(5):DELAY(1)=75:DELAY(2)=1
50: DELAY (3) = 250
315 REM *** PLAY INTRO ***
920 RESTORE 970:FLAG=0
930 READ NUTE,TYPE:IF NUTE=-1 THEN 450
940 SOUND VOICE,NUTE,10,8:SOUND VOICE+1
, NUTE+1,10,8
350 FOR I=1
 MOROGO CHAIN MAIL
                                       100 PLATE MAIL 200
 PLATE
 480 DIM SH$(48):SH$="010 SMALL SHTELDOS
0 LARGE SHTELDOSD +1 SHTELD "
490 DIM WP$(170)
500 WP$="001 SHORT SWORD 005 BROAD
5WORD 020 LONG SWORD 050 TWO H
 SWORD 02
ANDED SWORD"
                                                            050 TWO H
 SIO MP#(81)="100 +1 SWORD
SWORD 300 LIFE STEALER
                                                                    150 42
                                                                      900 V
   SWORD
 ORPAL BLADE "
$20 DIM SPELL$(40):SPELL$-"SLEEP FI
REBALL ROCK/MUD TELEPORT "
$30 OPEN $1.4,0,"K:"
$30 OF FLAG=1 THEN FLAG=0:GOTO 2150
$50 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(531)*253:POKE DL+9,71:POKE DL+
 560 POSITION 6,0:? "WELCOME!"
570 ? :? "To Caradian Castle.I am your
host,"
 580 ? "Teraldor.Are you New or are you" 590 ? "Revisiting ?";:GET #1,K 600 IF K=82 THEN 2130 610 IF K<>78 THEN 550
  615 REM *** NEW CHARACTER ***
  620 ? :? "What be thy name, stranger";
630 INPUT NAMES:IF LEN(NAMES)>10 THEN ?
"What do your friends call you";:GOTO
     630
  640 ST=INT(RND(1)*60)+10:DEX=INT(RND(1)
*75)+10:LV=1:LK=INT(RND(1)*6)+1:GD=INT(
RND(1)*2*LK)+10
  650 HP=INT(RND(1)*10)+EK:XP=0:SP=0:WP=0
  660 WP=0:ARM=0:SH=0:PO=0
665 REM *** SOOTHSAYER ***
670 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+3,71:POKE DL+
   680 POSITION (20-LEN(NAME#))/2,0:7 NAME
  690 ? :? "SUMMARY OF CHARACTER :"
700 POSITION 5,5:? "STRENGTH :";ST;"/1
   00"
  710 POSITION 5,7:? "DEXTERITY :";DEX;"/
   720 POSITION 5,9:7 "LUCK
730 POSITION 5,11:7 "GOLD
740 POSITION 5,13:7 "HIT PTS
750 POSITION 5,15:7 "LEVEL
760 POSITION 5,17:7 "EXP PTS
                                                               :";LK
:";GD
:";HP
:";LV
:";XP
   770 POSITION 0,21:7 "Press ERETURNI"; :G
   ETT
        #1. , K
   780 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+8,71:POKE DL+
```

```
790 POSITION (20-LEN(NAMES))/2,0:7 NAME
800 ? :? "KNOWN SPELLS :":? :?
810 IF SP=0 THEN ? :? "NONE":GOTO 830
820 FOR I=1 TO SP:? " "; SPELL&((I-1)*10+1,1*10):? :NEXT I
1*1041
890 POSITION 0,21:7 "Press ERETURNI"; : G
ET #1.K
840 GRAPHICS 0:SETCOLOR 2,0,0:DL=PEEK(5
60)+PEEK(561)*256:POKE DL+9,71:POKE DL+
850 POSITION (20-LEN(NAMES))/2,0:7 NAME
ONE":GUTU 900
890 ? ARM$((ARM-1)*16+5,(ARM-1)*16+16)
900 ? :? "SHIELD :";
910 IF SH=0 THEN ? "NONE":GUTO 990
920 ? SH$((SH-1)*16+5,(SH-1)*16+16)
920 ? :? "POTIONS:";:IF PO=0 THEN ? "NO
NE":GOTO 950
940 ? PO
950 POSITION 0,21:7 "Press ERETURNI";:
GET #1,K
955 REM *** GAME CENTRE ***
960 TRAP 960:GRAPHICS 0:SETCOLOR 2,0,0:
DL=PEEK(560)+PEEK(561)*256:POKE DL+9,71
 : POKE
            DL+6.
970 POSTTION 5.0:7 "Countyand"
975 REM *** WORD 'COURTYARD' INVERSE **
7980 ? "From here, you may visit"
990 ? :? "1) Castor, Soothsayer. He will reveal":? " your personality."
1000 ? :? "2) Danito, greatest of the white"
1010 7 "
                       witches and expert in heali
na.
1020 ? :? "3) Xonthar Retired swordsma
n.now a:"
1030 ? " master smith."
1040 ? :? "4) Laurenth A hard-but fair
  treasure"
 1050 ? and equipment buger." 1060 ? :? "5) RADRO Leave the castle.G o forth"
 1070 ?
                        to fame and wealth - or dea
 thin
 1080 7 :7 "6) Temporarily leave the ga
 1090 POSITION 2,20:7 "Which do you choose (1-6)";:GET #1,K
1100 K=K-48:IF K<1 OR K>6 THEN 7 CHR#(2
 53);:GOTO 1090
1110 ON K GOTO 670,1120,1310,1720,1970,
 2000
2000
1115 REM *** WITCH ***
1120 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
17,0:? "Danito."
1130 ? :? :? "In return for a small off
ering"
1140 ? :? "I will give you potions, made
    from
 1150 7 : 7 "the
1160 POSITION
                :? "the rarest of substances."
SITION 5,10:? "How much will you
";:INPUT I
 1170 I=INT(ABS(I)):IF I=0 THEN 960
1180 J=INT(RND(L)*10)+1:J=INT(J-LK*RND(
 1)):IF J=0 THEN J=1
1190 IF I<J OR I>GD THEN ? :? "Begone,5
coundrel !!":FOR I=1 TO 500:NEXT I:GOTO
    960
 1200 POKE 752,1:FOR L=1 TO INT(I/J):ON INT(RND(1)*4)+1 GOTO 1210,1230,1250,127
 1210 POSITION 2,15:7 "A mixture of Lacerne, for strength.":ST=ST+INT(RND(1)*LK) +1:IF ST>100 THEN ST=100
  1220 GOTO 1280
 1220 GOTO 1280
1290 POSITION 2,15:7 "Cayenne,for a faster swordarm.":DEX=DEX+INT(RND(1)*LK)+1
:IF DEX>100 THEN DEX=100
1240 GOTO 1280
1250 POSITION 2,15:7 "Asafetida.A luck-bringer.":LK=LK+1:IF LK>6 THEN LK=6
1260 GOTO 1280
  1270 POSITION 2,15:? "Comfreg root, for
```

```
healing.":PO=PO+INT(RND(1)*3)+1:IF PO>9
THEN PO=9
1280 FOR K=1 TO 500:NEXT K
1290 POSITION 2,15:FOR K=1 TO 40:? " ";
 NEXT K:NEXT
1300 GD=GD-J:GOTO 960
1305 REN *** SMITH ***
1310 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
14,0:? "Mastersmith:"
14,0:7 1
                  "Since you can only use 1 swo
1990 ? :? "or suit of armour at one tim

:,i will"

:340 ? :? "only sell you what you do no

t have."
rd, shield"
1930 7 :7
1350 IF WP<>0 THEN 1430
1360 ? :? "First, a sword :":POKE 752,1
1370
                ][ :::: ()
                       TO:7:7 It1;"> ";WP$(I*20+
         FOR
1.1%20+20):NEXT 1
1980 POSITION 2.22:? "Which One,sire ";
[GET #1,K:K=K-48:IF K<O OR K>8 THEN 198
1890 IF K=0 THEN 1480
1400 I=(K-1)*20+1:NAME2*=WP*(I,I+2):J=V
AL (NAME2#)
1410 IF GDKJ THEN 1980
1420 GD=GD-J:WP=K
1400 POSITION 2,22:7 "Press ERETURNI";
GET #1,K
1440 IF ARM<>0 THEN 1580
1450 ? CHR#(125):POSITION 14,0:? "Maste
rsmith."
rsmith."
1460 ? :? :? "Some Armour :":?
1470 FOR I=0 TO 4:? I+1;" > ";ARM#(I*16
+1.I*16+16):NEXT I
1480 POSITION 2,22:? "Which suit ";:GET
#1.K:K=K-48:IF K<0 OR K>5 THEN 1480
1490 IF K=0 THEN 1530
1490 IF K=0 THEN 1590
1500 I=(K-1)*16+1:NAME2$=ARM$(I,I+2):J=
VAL (NAME2#)
1510 IF GDKJ THEN 1480
1520 GD=GD-J:ARM=K
1590 POSITION 2,22:7 "Press ERETURNI";:
GET #1,K
1540 ? CHR#(125):POSITION 14,0:? "Mastersmith."
1550 IF SHC>0 THEN 1690
1550 IF 5H<>0 THEN 1690
1560 ? :? "A shield,perhaps :":?
1570 FOR I=0 TO 2:? I+1;" > ";5H*(I*16+
1,I*16+16):NEXT I
1580 POSITION 2,22:? "Which one ";:GET
#1,K:K=K-48:IF K<0 OR K>2 THEN 1580
1590 IF K=0 THEN 1630
1600 I=(K-1)*16+1:NAME2$=5H*(I,I+2):J=V
AL (NAME24)
1610 IF GDKJ THEN 1580
1620 GD=GD-J:SH=K
1610 IF
1680 POSITION 2,22:7 "Press CRETURNI";:
GET #1,K
1640 GOTO 960
1645 REM *** TREASURE EXCHANGER ***
1720 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
  720 GROWER CO.
720 GROWER CO.
730 IF WP=0 THEN 1810
740 I=WP*9+INT(LK*RND(1))
750 7 "Your sword : I offer "; I
760 POSITION 5,22:7 "Accepted (Y/N) ";
1.730
1740
1750
1760
:GET #1.K
1770 IF K=78 OR K<>89 THEN 1790
1780 WP=0:GD=GD+1
1790 POSITION 2,22:7 "Press CRETURN]
             CHR$ (125): POSITION 15,0:? "Treas
1800
urer. 4:7
 1810 IF ARM=0 THEN 1890
         I=SPR7+INY(LK*RND(1))
7 "Your armor : I offer ";I
POSITION 5,22:? "Accepted (Y/N) ";
1.830
10340
 GET
         #1,K
IF K=78 OR K<>89 THEN 1870
1850
         ARM=0:GD=GD+I
 1860
        POSITION 2,22:7 "Press CRETURNI
1870
   ::GET #4.1K
         ? CHR$(125):POSITION 15,0:? "Treas
1880
         1:7 :7
IF SH=0 THEN 1950
1890
        I=SPX2+INT(LK*RND(1))
? "Your shield : I offer ";I
POSITION 5,22:? "Accepted (Y/N) ";
1900
 1910
```

```
1930 IF K≔78 OR K<>89 THEN 1950
1730 SH=0:GD=GD+1
1940 SH=0:GD=GD+1
1950 POSITION 2,22:7 "Press CRETURN]
"; GET $1,K
1960 GOTO 960
1965 REM *** HERE WE GO!!! ***
1970 POKE 752,1:? CHR#(125);"FORWARD,";
NAMES;
 1980 OPEN #2,8,0,"D:NAME.DAT":PRINT #2;
NAME#:CLUSE #2
1990 FLAG=1:GOTO 2040
 1995 REM *** ENDGAME
                                                    ***
2010 ? : Unkertizo):POSITION 7,0:? "LEAVE" 2010 ? :? "Do gou wish ";NAME$;" to be" 2020 ? :? "placed in the INN for the duration ";
             ? CHR$(125):POSITION 7,0:? "LEAVE"
? :? "Do you wish ";NAME$;" to be"
 2030 GET #1,K:IF K=78 OR K<>89 THEN 211
2040 NAME2*="D:"
2050 NAME2*(3)=NAME*
2060 OPEN #2,8,0,NAME2*
2070 ? #2;ST:? #2;DEX:? #2;LK:? #2;HP:?
#2;LV:? #2;XP
2080 ? #2;WP:? #2;ARM:? #2;SH:? #2;PO:?
#2;SP:? #2;GD:? #2;PO
2090 CLOSE #2
2100 IF FLAG=1 THEN RUN "D:MAZE.BAS"
2110 TRAP 2120:XTO 99,#2,0,0,"D:NAME.DA
 2040 NAME25="D:"
2120 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
15.0:7 "GAME ENDED":7 :7 :END
2124 REM *** RESTORE CHARACTER ***
2126 REM *** FROM DISK ***
2130 GRAPHICS 0:SETCOLOR 2,0,0:7 "Your
name, sire ";:INPUT NAMES:IF LEN(NAMES)>
 name, sire ";
10 THEN 2130
10 THEN 2130
2140 ? NAMES;",eh ?"
2150 ? :? "One moment, lord..."
2160 NAME25="D:"
2170 NAME25(3)=NAMES:TRAP 2190
2180 OPEN #2,4,0,NAME2#:GOTO 2200
2190 ? :? "The name is not known here."
:CLOSE #2:FOR I=1 TO 500:NEXT I:GOTO 55
2200 INPUT #2;ST:INPUT #2;DEX:INPUT #2;
LK:INPUT #2;HP:INPUT #2;LV:INPUT #2;XP:
INPUT #2;WP
2210 INPUT #2;ARM:INPUT #2;SH:INPUT #2;
PD:INPUT #2;SP:INPUT #2;GD:INPUT #2;PD:
CLOSE #2
                   "Welcome back, my lord.Please ste
 2220
2220 ? "Welcome back,my ford.Prease step into"
2230 ? "the castle."
2240 POSITION 2,22:? "Press ERETURNI";:
GET #1,K:GOTO 670
2245 REM *** PHEW !!! ***
```

```
REM
        REM * RADRO - UNDERGROUND *
REM * BY MARC FREEBURY *
120
130
1.40 REM %
150 REM *******************
130 DIM NAME$(20),NAME2$(80),GEN$(20),A
(20,20),RATE$(120),STU(&),DUX(&),MAG(&)
(HIP(&),MONS$(110)
170 MONS$="ORC BRIGAND DRUID
                          TROLL
                                                                            MEDUSA
     BUGBEAR
                                                     VAMPIRE
                               LICH LUL 9DRAGON
MPKIN PEASANT
       DEMON V
 180 RATES BUMPKIN
                                                                           AMATEUR
     SWORDSMAN ADVENTURERKNIGHT
                                                                             SLAYER
RADROIST HERO DEMI-GOD "

190 RATE$(101)="GOD-TYPE 1"
200 OPEN $1,4,0,"D:NAME.DAT":INPUT $1;N
AME$:CLOSE $1
205 REM *** MUST LOAD CHARACTER ***
210 NAME2$="D:":NAME2$(3)=NAME$
220 OPEN $2,4,0,NAME2$:OPEN $1,4,0,"K:"
230 INPUT $2;ST:INPUT $2;LV:INPUT $2;L
K:INPUT $2;HP:INPUT $2;LV:INPUT $2;XP:I
NPUT $2;WP
240 INPUT $2;ARM:INPUT $2;SH:INPUT $2;P
0:INPUT $2;SP:INPUT $2;GD:INPUT $2;PO:C
LOSE $2
       RADROIST
                                                       DEMI-GOD
                               HERO
 LOSE #2
 250 HP2=HP:ST2=ST:DEX2=DEX
255 REM *** DRAW FRONT PAGE ***
260 GRAPHICS 8:SETCOLOR 2,0,0:COLOR 1:S
 ETCOLOR 1,0,0
270 PLOT 100,160:DRAWTO 100,20:DRAWTO 2
40,20:DRAWTO 240,160:DRAWTO 170,90:DRAW
```

GET

```
TO 100,160
280 POKE 709,12:POKE 752,1:7 CHR$(125);

** THE ENTRANCE ****
290 ? " "; NAME$
300 FOR I=1 TO 1500:NEXT I:GOTO 560
305 REM *** FAST MAZE PLOTTER ***
310 I=0:X1=0:Y1=0:XVEC=60:YVEC=32:XL=X:
YL=Y
320 ON DIR GOTO 330,340,350,360
330 XL=X-1:YL=Y+1:GOTO 370
340 XL=X+1:YL=Y+1:GOTO 370
350 XL=X+1:YL=Y-1:GOTO 370
360 XL=X-T:YL=Y-1
370 IF A(XL,YL)=0 THEN 400
380 PLOT X1,Y1+YVEC:DRAWTO X1+XVEC,Y1+Y
VEC:DRAWTO X1+XVEC,Y1+YVEC*4:DRAWTO X1,
    CL4YVEC#4
 390 GOTO 410
400 PLOT X1,
 200 PLOT X1, Y1: DRAWTO X1+XVEC, Y1+YVEC: D
RAWTO X1+XVEC, Y1+YVEC*4: DRAWTO X1, Y1+YV
  EC%5
410 ON DIR GOTO 420,430,440,450
420 XL=X+1:YL=Y+1:GOTO 460
430 XL=X+I:YL=Y-1:GOTO 460
440 XL=X-1:YL=Y-1:GOTO 460
450 XL=X-I:YL=Y-1:GOTO 460
450 IF A(XL,YL)=0 THEN 490
470 PLOT 319-X1,Y1+YVEC:DRAWTO 319-X1-X
VEC,Y1+YVEC:DRAWTO 319-X1-XVEC,Y1+YVEC*
4:DRAWTO 319-X1,Y1+YVEC*4
490 GOTO 500
490 PLOT 319-X1,Y1:DRAWTO 319-X1-XVEC,Y
1+YVEC:DRAWTO 319-X1-XVEC,Y
 490 PLOT 319-X1,Y1:DRAWTO 319-X1-XVEC,Y
1+YVEC:DRAWTO 319-X1-XVEC,Y1+YVEC*4:DRA
WTO 319-X1,Y1+YVEC*5
500 X1=X1+XVEC:Y1=Y1+YVEC:XVEC=XVEC/2:Y
 TO 320
 590 IF A(XL,YL)>0 THEN RETURN
540 PLOT X1,Y1:DRAWTO 919-X1,Y1:PLOT X1
,160-Y1:DRAWTO 919-X1,160-Y1
550 RETURN
   560 NAME24="D:"
 560 NAMEZS="D:"
565 REM *** OLD LEVEL ? ***
570 GRAPHICS 0:SETCOLOR 2,0,0:POSITION
15,0:? "Doorwanden.":? :?
5,0:? "Doorwanden.":? :?
580 ? "Do you wish to enter a saved level";:GET #1,K
590 IF K=78 THEN 690
600 IF K<>89 THEN 570
610 ? :? "Name of this stored level";:TNDHIT GENS
 5.0
580
   ENPUT GENS
   620 NAME2# (9) =GEN#
 620 NAMILE (3) -GEN®
630 TRAP 650
640 OPEN #2,4,0,NAME28:GOTO 660
650 CLOSE #2:GOTO 610
660 FOR I=1 TO 20:FOR J=1 TO 20:INPUT #
2;Z:A(I,J)=Z:NEXT J:NEXT I
670 INPUT #2;X:INPUT #2;Y:INPUT #2;DIR:
   CLOSE #2
  CLOSE #2
680 TRAP 40000:GOTO 770
684 REM *** ULTRA COMPLEX MAZE ***
686 REM *** GENERATOR!!! ***
690 ? CHR$(125):POKE 752,1:POSITION 16,
0:? "WAIT":Z=320
700 FOR 1=1 TO 20:A(I,1)=0:A(I,20)=0:A(
20,I)=0:A(1,I)=0:NEXT I
710 FOR 1=2 TO 19:FOR J=2 TO 19:POSITIO
N 21,0:? Z;" ":Z=Z-1
720 X=TNT(RND(I)*14):IF X>9 THEN X=0
   HEN 750
   HEN 750
760 A(X,Y)=9
765 REM *** RE-ENTRY POINT ALWAYS ***
770 GRAPHICS 8:SETCOLOR 2,0,0:COLOR 15:
IF A(X,Y)<>5 THEN GOSUB 310
780 7 CHR#(125):POKE 752,1
790 7 " W STRENGTH ";ST2;" DEXTERIT
Y ";DEX2;" "
800 7 "A D HIT PTS ";HP2;" TREASURE
            ; GD
   810 GET #1.K
815 REM *** IF TURN,DO IT ***
820 IF K=ASC("A") THEN DIR=DIR-1:DIR=DI
R+(DIR=0)*4:GOTO 770
```

```
THEN DIREDIREL: DIREDI
                                     K≔ASC("D")
 830 IF K-M3L( D. 7770
R-(DIR=5) **4:GOTO 7770
840 IF K<>ASC("W") THEN 810
850 XL=X+(DIR=2)-(DIR=4):YL=Y+(DIR=1)-(
  DIR=3)
 01R=3)
855 REM *** HIT A WALL, TWIT! ***
860 IF A(XL, YL)=0 THEN ? CHR$(125);"
OUCH!":? CHR$(259):FOR I
=1 TO 500:NEXT I:GOTO 780
 =1 10 500:NEXT 1:GUTU 730
870 X=XL:Y=YL
880 IF A(X,Y)=1 OR A(X,Y)=5 THEN 770
890 IF A(X,Y)<>4 THEN 960
895 REH *** NIT FALLS DOWN HOLE! ***
900 ? CHR$(125);" *** A P
*****
                                                                                                                                                               XXXX A PIT!
                                           I=0 TO 255:50UND 0,I,10,15-INT(
 950 GDTO 770
955 REM *** I FEEL DIZZY... ***
960 IF A(X,Y)<>8 THEN 980
970 DIR=INT(RND(1)*4)+1:GOTO 770
980 IF A(X,Y)<>9 THEN 1250
985 REM *** YIPPEEE! WAY OUT. **
   990 ? CHR$(125); "Stairway out Do you wi
sh to leave Y/N"; GET #1,K
1000 IF K<>89 AND K<>78 THEN 990
1010 IF K=78 THEN 770
1020 GRAPHICS 0.sc.

1020 GRAPHICS 0.sc.

URVIVED!!"

1030 ? :? "Current gold is "; GD

1040 ? :? "Current experience is "; XP

1050 XPE=100:IF LV=1 THEN 1070

1060 FOR I=1 TO LV-1:XPE=XPE+XPE:NEXT I

1070 IF XP>XPE THEN LV=LV+1:XP=0:HP=HP+

INT(RND(1)*10)*LV:? :? "You have made i

1 to level "; LV-

1 CD=ting is : ";
     1020 GRAPHICS O:SETCOLOR 2,0,0:? "YOU S
    TNY (RND (17%107%LV); (00 (10% (10% (10%))); (10% (10%)); (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (10%) (1
                         dad K
     Tizo GRAPHICS O: SETCOLOR 2,0,0: POSITION
    1120 GRAPHILS 0:5E(CULDR 2,0,0.POSITION 15,0:? "Doorwanden.":?:? :? 1130 ? "Doorwanden.":?:? :? 1130 ? "Doorwanden.":? :? 1140 IF K<>89 AND K<>78 THEN 1120 1150 IF K<>89 THEN 1210 1160 ?:? "Name of this stored level "; :INPUT CENE
     :INFUL GERB
1170 NAME28="D:":NAME2#(3)=GEN#
1180 OPEN #2,8,0,NAME2#
1190 FOR I=1 TO 20:FOR J=1 TO 20:Z=A(I,
J):PRINT #2;Z:NEXT J:NEXT I
1200 PRINT #2;X:PRINT #2;Y:PRINT #2;DIR
          CLOSE
                                           4:2
     1205 REM *** DUMP CHARACTER ***
1210 ? CHR$(125):NAME2$="D:":NAME2$(0)=
NAME$:OPEN $2,8,0,NAME2$
1220 PRINT $2;ST:PRINT $2;DEX:PRINT $2;
      LK: PRINT #2; HP: PRINT #2; LV: PRINT #2; XP:
   PRINT #2;WP
1290 PRINT #2;ARM:PRINT #2;SH:PRINT #2;
PO:PRINT #2;SP:PRINT #2;GD:PRINT #2;PO:
CLOSE #2
1240 RUN "D:CASTLE.BAS"
1245 REM *** HELLO,WHAT'S THIS ? ***
1250 IF A(X,Y)<>7 THEN 1480
1260 A(X,Y)=1:RESTORE 1840:Z=INT(RND(1)
*INT(XP/1000)):IF Z>9 THEN 1260
1270 FOR I=1 TO Z:READ NAME2*,TGP,MAG,5
TU,DUX:NEXT I
1280 ? CHR$(125);"You have found ";NAME
2*;:IF TGP>0 THEN ? " worth ";TGP;" GP"
:GP=GP+TGP
     PRINT #2;W
                                     #2;WP
          GP=GP+1GP
     1290 ? :IF MAG>O THEN ? "You gain magic
at ability":SP=SP+INT(RND(1)*LK):IF SP>
4 THEN SP=4
1300 IF STU>O THEN ? "You feel stronger
      ":ST2=ST2+INT(RND(1)*(X/1000))
1810 IF DUX>0 THEN ? "Your armour feels weightless,":DEX=DEX+INT(RND(1)*(ST/10))
       1920
                                  ? "Press CRETURNI"; :GET #1,K
       1330 GOTO 770
       1994 REM *** LIST OF OBJECTS-CAN ***
1996 REM *** DE EXTENDED BY YOU ***
```

```
1940 DATA Magic Scrolls,0,1,0,0
1950 DATA Louse Coins,2,0,0,0
1960 DATA A Green Potion,0,0,1,0
1970 DATA A Blue Potion,0,0,0,1
1980 DATA A Ring,9,1,0,0
1990 DATA A carved Figure,2,0,0,0
1400 DATA Cemstones,4,0,0,0
1410 DATA Grant oils,0,0,1,1
1420 DATA A rod,0,1,0,1
1424 REM *** ULP! WHAT'S THAT ***
1426 REM *** DARK,NASTY SHADOW? ***
1430 GRAPHICS 0:SETCOLOR 2,0,0:POKE 752
1440 TGP=INT(RND(1)*(LV/2))+INT(RND(1)*
1440 TGP=IRT(RRD(17%(LV727771RT(RRD(17%)

3):IF TGP<1 THEN TGP=1

1450 IF TGP>6 THEN TGP=6

1460 TGP2=TGP:GOLD=0:XPE=0

1470 FOR I=0 TO TGP=1:MONS=INT(RND(1)*L

V)+1+INT(RND(1)*2):IF MONS>10 THEN MONS
1480 RESTORE 2180:GOLD=GOLD+INT(RND(1)*
(MONS)):XPE=XPE+MONS%50
1490 FOR J=1 TO MONS:READ STU:STU(I+1)=
STU:READ DUX:DUX(I+1)=DUX:READ MAG:MAG(
 I+1)=MAG:READ FITP:HIP(I+1)=HIP
I500 NEXT J:MONS=MON5-1:NAME2*(I*10+1,I
*10+10)=MON5*(MON5*10+1,KON5*10+10):NEX
 1510 ? "You Have Come Upon :"
1520 POSITION 2,2:? "GROUP NAME
 TU5"
:330 FOR I=0 TO TGP-1:? " "; I+1;" "; NAME2*(I*10+1,I*10+10); :POSITION 18,I+3:IF HIP(I+1)>0 THEN ? "ALIVE " 1540 IF HIP(I+1)<=0 THEN ? "DEAD " 1550 NEXT I
 1560 IF
      60 IF RND(1)>0.65 THEN POSITION 2,20: "The Enemy Have The Advantage..":GOTO
    1930
1570 POSITION 2,20:? "Your Options : 1)
FIGHT 2) WITHDRAW":POSITION 17,21:? "3
) SPELL 4) BARGAIN"
1580 POSITION 17,22:? "5) DRINK POTION"
1590 POSITION 2,23:? "Your Option ";:GE
     ## . K
 1600 IF KK49 OR K>59 THEN 1590
1610 POSITION 0.20:FOR I=1 TO 15:7 "
";:NEXT I
 1620 K=K-48:ON K GOTO 1830,1810,1720,16
 60,1690
1625 REM *** MAGIC POTION! ***
1630 IF PO=0 THEN 1940
             HP2=HP24INT(RND(1)*10)+1:IF HP2>HP
    THEN HP2=HP
 1650 GOTO 1940
1654 REM *** LOOK GUYS,CAN'T WE ***
1656 REM *** MAKE A DEAL ?? ***
            REM *** MAKE A DEAL ??
IF LV/10>RND(1) THEN 1940
 1670 DAM=INT(RND(1)*5)*TGP2+1:IF DAM>GU
THEN 1940
 1680 POSITION 2,20:7 "You May Pass For ":DAM;" Gp.Y/N";
1690 GET #1,K:IF K<>89 AND K<>78 THEN 1
 690
                                   THEN GD=GD-DAM:GOTO 770
                      K=:89
  1700
  1710 GOTO 1940
 1715 REN *** ZAPPEM!! ***
1720 POSITION 2,20:? "Which Spell (1-4)
  1790 GET #1,K:K=K-48:IF KK1 OR K)4 THEN
    1730
  1740 IF SPKK OR RND(1)>0.9 THEN SP=0:GO
  TO 1950
  1750 SP=SP-K:IF SP=1 THEN I=INT(RND(1)*
TGP)+1:HIP(I)=HIP(I)-INT(RND(1)*4)+1:GD
        1950
 1760 IF 5=2 THEN I=INT(RND(1)*TGP)+1:HI

P(I)=INT(RND(1)*4)+1:GOTO 1950

1770 I=INT(RND(1)*3)-1:J=INT(RND(1)*3)-

1:A(X+I,Y+J)=1:GOTO 770

1780 X=INT(RND(1)*17)+2:Y=INT(RND(1)*17)

)+2:IF A(X,Y)<>1 THEN 1780
 1780 X | INT(RND(17%1772:1-18) | 1780 | 1790 GRAPHICS 2:SETCOLOR 2,0,0:POKE 752 | 1:POSITION 9,6:? #6; "GO!" | 1800 FOR 1=255 TO 0 STEP -1:SOUND 0,1,8 | 8:NEXT 1:SOUND 0,0,0:GOTO 770 | 1810 TF RND(1)>0.7 THEN POSITION 2,20:FOR I=1 TO 10:? " "; :NEXT I:
  GOTO 1990
1820 GOTO 770
1824 REM *** THE FOOL'S TRYING ***
```

XX. OUY! REM \*\*\* TO FIGHT 1830 POSITION 2,21:7 "Against Which Gro up ";:GET #1,K 1840 K=K-48:IF K<1 OR K>TGP OR HIP(K)<= 0 THEN 1830 O THEN 1830 1850 POSITION 2,20:FOR I=1 TO 10:7 " ";:NEXT I 1860 DAM=INT(RND(1)\*100)\*INT(XP/1000) 1870 IF DAM<DUX(K) THEN POSITION 2,20:7 "Your Stroke Goes Wide!":FOR I=1 TO 20 0:NEXT I:GOTO 1930 0:NEXT I:GOTO 1980
1880 DAM=INT(RND(1)\*100)
1890 IF DAM(STU(K) THEN POSITION 2,20:?
"THE ";NAME28((K-1)\*10+1,(K-1)\*10+10);
" Defends!":GOTO 1980
1900 DAM=INT(RND(1)\*WP\*2\*LV)+1:DAM=DAM+(WP=6)+(WP=7):DAM=DAM+(WP=7 AND RND(1))
0.95)\*100+(WP=8)\*DAM
1910 POSITION 2,21:? "You Strike For ";
DAM;" points!":HIP(K)=HIP(K)-DAM
1920 IF HIP(K)<=0 THEN POSITION 2,22:? 1920 IF FIF(R)(=0 THEN POSITION 2,22:?
"The ";NAME2\$((K-1)\*10+1,(K-1)\*10+10);
is dead!":TGP2=TGP2-1
1930 FOR I=1 TO 150:NEXT I
1940 POSITION 0,20:FOR I=1 TO 15:?"
";:NEXT I
1950 TF TGP2=0 THEN GOTO 2120 1960 FOR I=0 TO TGP-1:IF HIP(I+1)<=0 TH EN 2100 1970 DAM=INT(RND(1)\*100) 1980 POSITION 2,20:? "The ";NAME2\*(I\*10 +1.I\*10+10);" strikes..."; 1990 IF RND(1)<0.75 OR MAG(I)=0 THEN 20 400 2000 7 "with a thunderbolt!":FOR J=1 TO 150: NEXT AM=INT(RND(I) #MAG(I) ) +1: MAG(I) =MAG(I) 2010 DAM\*\*INT(RMD(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\*MMG(I)\*\*TI:\*MMG(I)\*\* EXT J:GOTO 2100 2050 IF RND(1)\*100+LV\*4KST2 THEN ? "you defend!":FOR J=1 TO 100:NEXT J:GOTO 21 2060 DAM=INT(RND(1)\*(STU(I+1)/5))+1:DAM =DAM-INT(RND(1)\*(ARM\*2)):IF DAM<1 THEN DAM=:1. 2045 REN \*\*\* OWWWWWW!! \*\*\* 2070 ? "and hits for ";DAM;" points!" 2080 FOR J=1 TO 150:NEXT J 2090 HP2=HP2-DAM:IF HP2<=0 THEN GOTO 22 2100 POSITION 0,20:FOR J=1 TO 15:7 " ";:NEXT J 2110 NEXT 1:GOTO 1520 2114 REM \*\*\* CAN I OPEN MY EYES \*\*\*
2116 REM \*\*\*
2120 ? CHR\$(125);:POSITION 19,0:? "You Survived (\*) 2180 7 :7  $90\ 7\ :7\ :7$  "Swarching the bodies of t "reveals"; GOLD; " gold pieces!"; 2140 :GD=GD+GOLD e150 7 :7 "Experience points gained ";X 2150 7 :7 "E PE:XP=XP+XPE 2160 POSITION 2,21:7 "PRESS CRETURNI";: GET #1,K 2170 A(X,Y)=1:GOTO 770 2173 REM \*\*\* MONSTER ATTRIBUTES \*\*\* 2180 DATA 10,8,0,3,16,20,0,6,5,8,10,4 2190 DATA 90,18,0,12,50,10,0,20,60,40,2 2190 DATA 50,10,0,12,00,0 0.26 2200 DATA 64,56,34,31,85,86,49,43,89,37 .65.66,95,45,75,86 2204 REM \*\*\* ABANDON HOPE ALL YE \*\*\* 2206 REM \*\*\* WHO ENTER HERE. \*\*\* 2210 GRAPHICS 0:SETCOLOR 2,0,0:POKE 752 .1:POSITION 18,10:7 "DEAD" 2220 POSITION INT((40-LEN(NAME\*))72),12 7 NAME\$
2230 COLOR 140:PLOT 19,14:DRAWTO 19,20:
DRAWTO 20,20:DRAWTO 20,14
2240 PLOT 16,16:DRAWTO 23,16:COLOR 32:P LOY 0,0 2250 XIO 33,42,0,0,"D:NAME.DAT" 2260 XAME24="D:":NAME24(3)=NAME4:XIO 33 .#2.0,0,NAME2# 2270 POSITION 2,0:POKE 752,0:END

## 





Inside...

Setting new standards in educational software with Sinclair-Macmillan

Plus six other learning programs

#### TODAY, **LEARNING** IS A **NEW GAME**

Subsidised microcomputers are now commonplace as teaching aids for the very youngest children and the ZX Spectrum is prominent amongst those micros at use in schools.

In the relatively short time that the Spectrum has been at work in the classroom, two questions have been answered. Yes: with the right software, the micro can and does teach effectively and thoroughly (and gives teachers more time to devote to individual pupils). Yes: young children think little of working rapidly and successfully, with a screen and keyboard, on even quite complex subjects.

In this Sinclair Special we reveal a range of educational software specifically designed to make full use of these advantages. The programs produced by Sinclair in collaboration with Macmillan Education are fascinating. They deal imaginatively and most effectively with early reading skills and take a truly refreshing approach to basic science.

In the Blackboard range we've programs which bring a light-hearted clarity to the tricky matters of spelling and punctuation.

These programs are designed for use both at home and in the classroom. Each program is accompanied by full documentation which gives parents helpful advice and guidance on the educational objectives.

The programs covered on these pages represent only a fraction of the full and fast-growing list of Spectrum software. Be assured we'll keep you in touch with new developments as they happen.

David Park **Education Marketing Manager** 

### **NEW WAYS TO LEARN WITH** THE ZX SPECTRUM®

### **Programs from Blackboard Software**

The new range of educational programs from Blackboard Software makes learning an enjoyable process by involving the child in a game which teaches as it entertains.

Each program has a step-by-step example section and gives correct answers after a number of attempts. Vocabulary changes can be made, allowing each program to keep pace with the child's development. This flexibility can also be used in the classroom to cater for children of differing ability.

The instructive and colourful games which follow the successful completion of each group of sentences provide useful practice in letter recognition and increase familiarity with the Spectrum keyboard.

All programs are written for the 48K RAM Spectrum.



#### **Alphabet Games**

Three games of letter recognition (using either upper or lower case) to help children learn the alphabet and find their way round the computer keyboard.

Alphagaps – The full alphabet is displayed, along

with a second, incomplete version. The child must fill in the missing letters.

Random Rats — Press the letter key that is displayed on the gun to destroy the rats which have invaded the cellar!

Invaders – Stop little green men from landing on Earth by pressing the appropriate letter.

#### **Early Punctuation**

While an animated matchstick man marches above displayed sentences the child must decide which punctuation mark is missing and where to insert it. At the touch of a key the matchstick man drops the mark into place. After successful completion of every sentence in the exercise, light relief comes in the form of a bottle-shooting game!

#### The Apostrophe

As each sentence is displayed, a bird appears with a worm in its beak. The keyboard is used to move the bird and drop the worm into the correct place for the apostrophe. When ten sentences have been corrected, the Grub Game is displayed. Press the correct character to change the grub into a butterfly...before it munches through a flower!

#### **Capital Letters**

A program to teach the use of capital letters. Sentences incorporating proper nouns and sentences without opening capitals are displayed. The child inserts the correction by guiding an animated figure to the appropriate letter.

For each correct answer an apple grows on a tree.
After ten correct answers the child's skills in recognising letters and using the Spectrum keyboard are needed to save the apples as they fall to the ground.

#### **Speech Marks**

A comprehensive program including sentences with one or two sets of speech marks ("inverted commas") and exercises in both direct and reported speech.

Using the Spectrum keyboard, a cursor is used to guide speech marks to the correct position. The program offers three levels of difficulty, with full examples for each section. Guide Max the mouse through a maze, after the correct completion of five sentences from each section, but beware of Persian cats!

#### Castle Spellerous

A spelling game with ten levels of vocabulary, including words with silent first letters, double letters and other difficult words. The Princess has been captured and carried off to Castle Spellerous. Helped by ten soldiers, the child can attempt a rescue by giving the right answers. Part of a siege tower is built for each correctly spelt word. Mistakes are costly the wicked wizard appears as a vampire bat, turning the men into frogs, butterflies and bats!

When ten words are spelt correctly the rescue begins and the wizard takes flight.

## SINCLAIR + MACMILLAN: A NEW DIMENSION IN EDUCATIONAL PROGRAMS

Sinclair have joined forces with Macmillan Education to produce a completely new and different range of educational software. The results so far can be seen in these exceptional programs.

The Learn to Read series is derived from Macmillan Education's best-selling primary school reading scheme, Gay Way. It offers a unique opportunity for parents and

teachers to participate in the child's first experience in reading.

Macmillan Education's Science Horizons is one of Britain's most successful school science schemes. Each program concentrates on key scientific ideas and, through simulation of real life, makes the learning process entertaining and enjoyable.



#### Learn to Read 1

Learn to Read 1 is designed for children who are just beginning to read. It is in four parts, each of which develops skills central to the reading process — letter recognition, sight vocabulary, early spelling and memory. The program is full of colour and fun and children will enjoy learning to read as they meet the animal characters — Ben the dog, Jip the cat and their friends.



#### Learn to Read 4

Learn to Read 4 is the alphabet program in the Learn to Read series.

Using various stimulating activities the program gives the child plenty of practice in working with the alphabet — matching initial letters to words and pictures and spotting missing letters. These exercises build familiarity with simple sequences within the alphabet



#### Glider

Be a glider pilot! The glider models real-life gliding conditions so that you can learn through experience. As the pilot you must consider the time of day, the amount of cloud cover and the kind of terrain below you in order to find the up-currents of air that will keep you airborne. Try to fly as far as possible and, when you are high enough, navigate your way back to your home airfield and land safely — if you can.



#### Learn to Read 2

Learn to Read 2 extends the fundamental reading skills practised in the first program, as well as encouraging logical thinking. The child's vocabulary is gradually built up as new words such as "red," "green," "car," "ship" and "bus" are introduced. In addition, Learn to Read 2 features an attractive 'reward' system enabling children to see their achievements grow.



#### Learn to Read 5

Learn to Read 5 teaches positional language — often difficult to understand and remember — by using words and phrases such as "behind" and "in front of," "inside" and "outside."

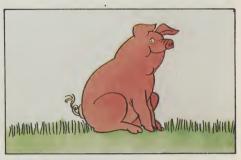
The program first demonstrates the meanings of the words using clear pictures. It then tests the child's understanding of the words in two lively games.



#### Survival

Discover what it is like to be an animal in the wild! Be a lion stalking your prey, escaping human hunters. Or be a hawk, mouse or even a butterfly, searching for food and avoiding predators.

Survival models the natural world and brings to life hazards that different creatures must face in their struggle to stay alive.



#### Learn to Read 3

Learn to Read 3 builds on the child's progress so far, so that he or she can gain the confidence to move on through the complex reading process. Learn to Read 3 features four different activities, all of which are colourful and lively. Further vocabulary is introduced until the child is reading more than 30 words.



#### Cargo

Set sail around the world. Choose your ports of call — New York, Tokyo, Belem, Helsinki — then the real challenge begins! You must reach your destinations safely, weathering storms on the way. But first, load your cargo — using all your knowledge and skill. Poor loading can mean capsizing and sinking. Your rank, if not your life, is always at stake!



#### Magnets

With an army of small magnets you set out to conquer the powerful supermagnets of your opponent. You have one weapon — your forces of magnetic attraction and repulsion.

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## Loads programs instantly Takes two joysticks Just plug-in and play

The ZX Interface 2 is the latest new peripheral for the ZX Spectrum system. It enables you to use new ZX ROM cartridge software: plug-in programs that load instantly. There are ten terrific games already available on cartridge. ZX Interface 2 also allows you to use

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To: Sinclair Research Ltd, FREEPOST, Camberley, Surrey, GU15 3BR.

one or two standard joysticks without the need for separate special interfaces.

To use new ZX ROM Cartridge programs, just connect Interface 2 to the rear of your Spectrum or Interface 1 and plug in the cartridge of your choice. Switch on and the program is then loaded, ready to run!

You can use any joystick that has a 9-way D plug. Use one or two of them for extra fun with suitable ZX ROM cartridge or Sinclair cassette programs — or with dozens of other Spectrum programs.

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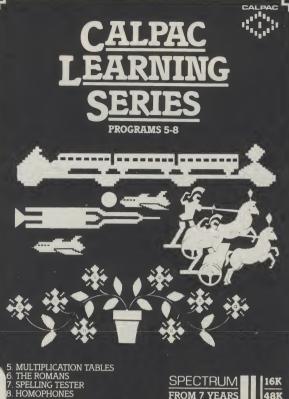
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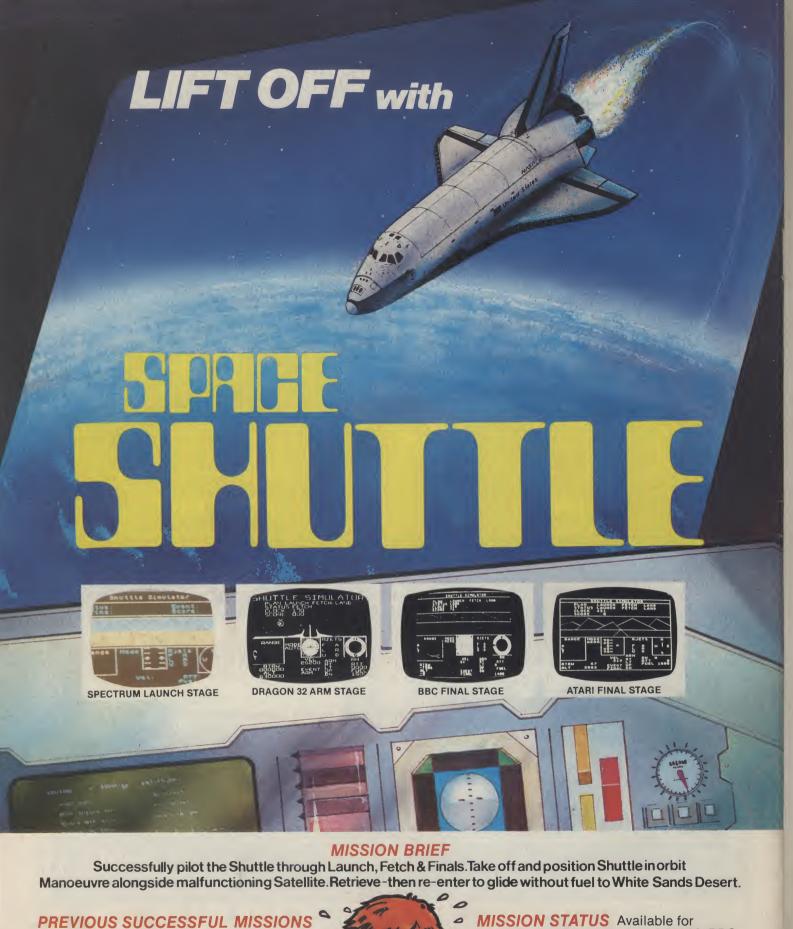
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